



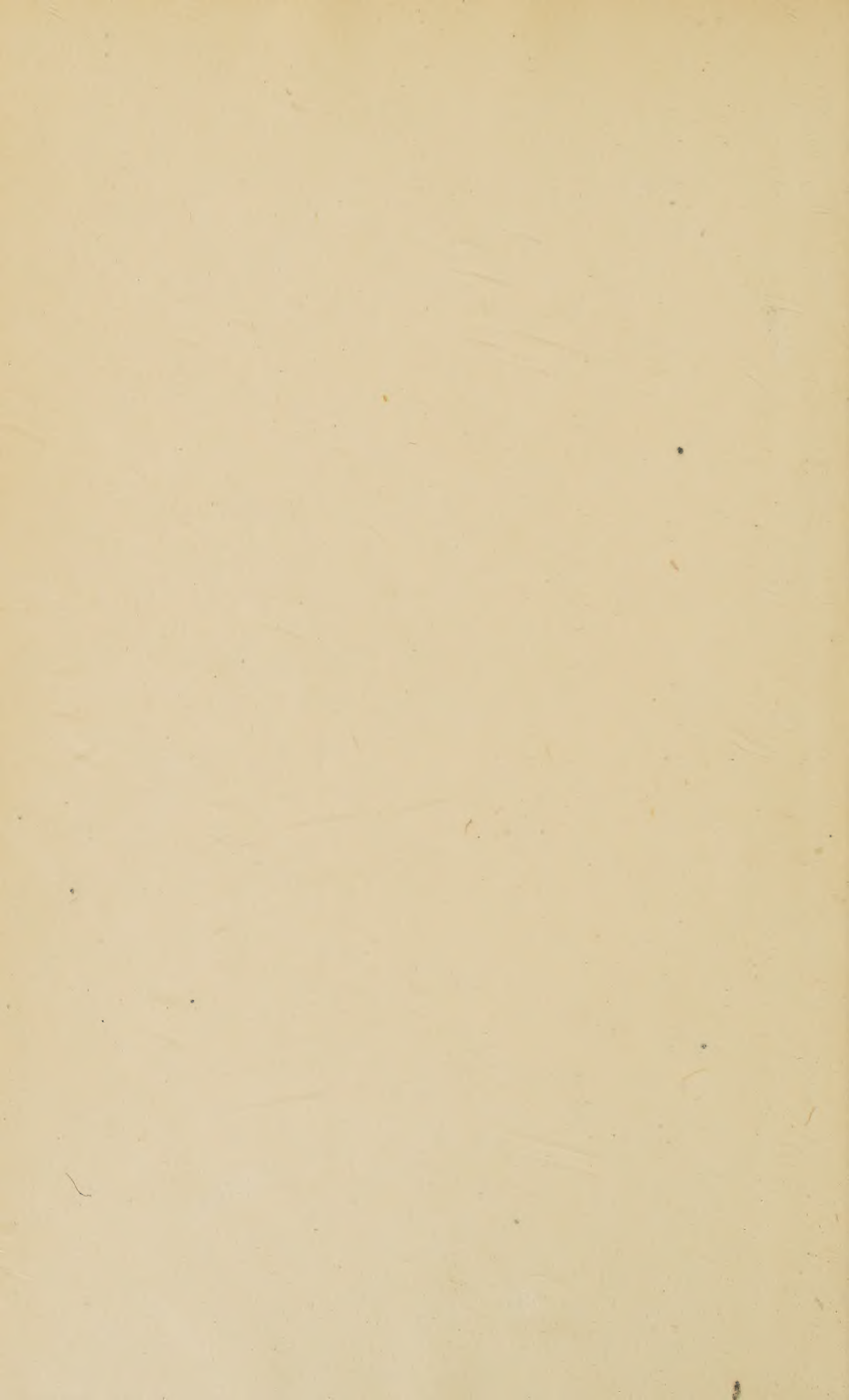
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THE  
ZOOLOGICAL RECORD

VOLUME 80 PART 1

1943

RECORDS OF ZOOLOGICAL LITERATURE

CONTENTS

1943

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# THE ZOOLOGICAL RECORD

VOLUME THE EIGHTIETH

BEING THE

RECORDS OF ZOOLOGICAL LITERATURE

RELATING CHIEFLY TO THE YEAR

1943

COMPILED FOR THE ZOOLOGICAL SOCIETY OF LONDON BY

A. G. BRIGHTON, E. BROWNING, M. BURTON, F. C. FRASER, J. P. HARDING,  
A. B. HASTINGS, C. A. HOARE, W. NICOLL, A. E. SALISBURY, J. K. S. ST.  
JOSEPH, THE LATE W. L. SCLATER, M. A. SMITH, C. J. STUBBLEFIELD, H. DIGHTON  
THOMAS, AND THE IMPERIAL INSTITUTE OF ENTOMOLOGY.

EDITED BY

MALCOLM SMITH

Explorate solum : sic fit via certior ultra.

LONDON:

PRINTED FOR THE ZOOLOGICAL SOCIETY  
SOLD AT THEIR HOUSE IN REGENT'S PARK

1945.

## PREFACE.

THIS Volume, the eightieth, of the Zoological Record, deals mainly with the publications of 1943, but includes also those which, for various reasons, were not recorded in previous Volumes.

Articles in non-European languages, unless they are accompanied by an abstract in a European language, are not included. Articles and books which have not yet reached this country, but concerning which knowledge has been obtained from other sources, are recorded as far as the information permits. They will, if necessary, be dealt with more fully when they can be seen by the Recorders.

The Sections on Protochordata and Pisces which were not included in Volume seventy-nine cover the years 1942 and 1943. The total number of articles and books dealt with in this Volume is 7,405.

MALCOLM SMITH,

*Editor.*

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Papers and Memoirs intended for this work should be addressed to "The Editor, Zoological Record, British Museum (Natural History), Cromwell Road, London, S.W.7." It is requested that, in the case of separately printed copies of papers so forwarded, the original pagination should be indicated.



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# I. COMPREHENSIVE ZOOLOGY

ARRANGED BY

the late W. L. SCLATER, M.A.

AND

MALCOLM SMITH.

It is with deep regret that we record that Mr. W. L. Sclater was killed by enemy action on July 4, 1944. The following Section has been compiled from his MSS.

This section includes works that deal with all branches of Zoology, and are of general interest to Zoologists. It is, therefore, not complete in itself as regards any one group. The special records complete each subject.

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# 2. PROTOZOA

ARRANGED BY  
CECIL A. HOARE, D.Sc.

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BY

M. BURTON, D.Sc.

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ARRANGED BY

H. DIGHTON THOMAS, M.A., PH.D.

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*Syntheclium nanum* sp. n. p. 80 fig. Florida, FRASER Proc. New England Zool. Club 22 1943.

*Tiaranna rotunda* p. 36, KRAMP 63.

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*Turritopsis fascicularis* sp. n. p. 76 fig. Florida, FRASER Proc. New England Zool. Club 22 1943.

*Veella* sp. p. 16 fig., *veella* p. 18 fig., CASTER 21.

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*Adelograptus* gen. n. p. 114, genotype (by author's designation) *Bryograptus* ? *hunnebergensis* p. 114 *Dictyonema* Shales N.W. Europe, *divergens* p. 114, *lapworthi*, *simplex*, *pusillus*, *victoriae*, *pauxillus* p. 115, ? *A. crassus* p. 115, ? *A. antiquus* p. 116, BULMAN Ann. Mag. nat. Hist. 11 7 1941.

*Anisograptus* discussed p. 107, *matanensis* p. 108 fig., *richardsoni* sp. n. p. 109 fig., *flexuosus* sp. n. p. 110 fig., ? U. Tremadocian Canada, *ruedemanni* sp.

n. p. 111 fig. *Dictyonema* Shales Norway, *monseni* sp. n. p. 112 fig. U. Tremadocian Norway, ? *A. retroflexus* p. 113, ? *A. heres* p. 114, BULMAN Ann. Mag. nat. Hist. 11 7 1941.

*Bryograptus* discussed p. 104, restricted use p. 105, *kjerulfi* p. 105, *kjerulfi* ? var. *cumbrensis* p. 106, *patens* p. 106, ? *B. spinosus* p. 106, ? *B. ramosus* p. 106, ? *B. bröggeri* p. 107, ? *B. callavei* p. 107, *sarmentosus* p. 107, ? *B. sp.* aff. *hunnebergensis* and ? *B. hunnebergensis* var. *norvegica* referred to *Anisograptus monseni* p. 112, *B. retroflexus* referred to ? *Anisograptus* p. 113, and *B. ? hunnebergensis*, *B. divergens* p. 114, *lapworthi*, *simplex*, *kjerulfi*, *victoriae*, *pauxillus* and *crassus* p. 115 all referred to *Adelograptus*, BULMAN 19A.

*Callograptus tenuissimus* sp. n. p. 1771 fig. Ordovician Texas, DECKER Bull. Amer. Assoc. Petrol. Geol. Oklahoma 26 11 1942.

*Climacograptus krafti* juv. p. 112 fig., TEIXEIRA 100.

*Clonograptus* discussed p. 116, *tenellus* var. *callavei* p. 107, *C. (Staurograptus ?)* *heres* referred to ? *Anisograptus* p. 114, BULMAN 19A.

*Cystograptus* structure p. 110 fig., TEIXEIRA 100.

*Dicellograptus gurlleyi* p. 1391 fig., DECKER 27.

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*Didymograptus* cf. *bartrumi* p. 1772 fig., DECKER 26.—*D. sp. nov.* [sic] p. 262, KUO 65.

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*Gothograptus*—vide *Retiolites*.

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*Conocyathus* diagnosed p. 210, *zelandiae* p. 336 fig., VAUGHAN & WELLS 105.

†*Conophyllia* diagnosed p. 116, *boletiformis* p. 302 fig., VAUGHAN & WELLS 105.

†*Conosmilia* diagnosed p. 225, *anomala* p. 341 fig., VAUGHAN & WELLS 105.

†*Conotrochus* (subgen. of *Ceratotrochus*) diagnosed p. 208, *typus* p. 334 fig., VAUGHAN & WELLS 105.

*Corallimorphus rigidus* p. 4, CARL-GREN 20.

†*Corofolius* possibly a synonym of *Calamophyllia* or *Thecosmilia* p. 242, VAUGHAN & WELLS 105.

*Corynactis globulifera* p. 7 fig., *californica* p. 8 fig., CARL-GREN 20.

*Coscinaraea* diagnosed p. 127, *monile* p. 305 fig., VAUGHAN & WELLS 105.

†*Craspedophyllia* diagnosed p. 116, VAUGHAN & WELLS 105.

†*Crateroseris* diagnosed p. 132, *fungiformis* p. 308 fig., VAUGHAN & WELLS 105.

†*Crepidophyllum* ? *yohi* p. 54, SMITH & YÜ 94.

†*Cricocyathus* diagnosed p. 137, *annulata* p. 304 fig., VAUGHAN & WELLS 105.

†*Cryptangia* diagnosed p. 177, *woodi* p. 323 fig., VAUGHAN & WELLS 105.

*Otenella* diagnosed p. 220, VAUGHAN & WELLS 105.

*Culicia* diagnosed p. 176, *tenella* p. 323 fig., VAUGHAN & WELLS 105.

†*Cyathazonia* discussed p. 194, *cornu* p. 195, HILL 42.—*C. cornu* var. *erecta* var. n. p. 120 fig. Lower Carboniferous Yorkshire, HUDSON & FOX Proc. Yorks. Geol. Soc. 25 2 1943.

*Cyathelia* diagnosed p. 182, VAUGHAN & WELLS 105.

*Cyathoceras* diagnosed p. 204, *diomedae* p. 333 fig., VAUGHAN & WELLS 105.

†*Cyathophora* diagnosed p. 109, VAUGHAN & WELLS 105.

†*Cyathophorinae* subfam. n. (of *Stylinidae*) p. 109, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Cyathophyllia* diagnosed p. 160, VAUGHAN & WELLS 105.

†? *Cyathophyllum* *subcaespitosum* Meek of Miller possibly *Caninia arcuata* q.v., JEFFORDS 57.

†*Cyathoseris castroi* p. 333 fig., *pachypetala* p. 338 fig., *ravicalyx* p. 339 fig., *ravistella* p. 340 fig., SABARIS 84.—*C.* diagnosed p. 123, *applanata* p. 303 fig., VAUGHAN & WELLS 105.

†*Cyathosmilia* diagnosed p. 224, *velata* possibly a *Schizocyathus* p. 225, VAUGHAN & WELLS 105.

†*Cyathotrochus* diagnosed p. 213, *adclaidensis* p. 337 fig., VAUGHAN & WELLS 105.

†*Cyclolites garnieri* p. 224 fig., ALMELA, RÍOS & GARRIDO 6.—*C.* ? sp. n. p. 201 fig. Eocene California, DURHAM J. Paleont. Menasha Wis. 17 2 1943.—*C.* diagnosed p. 134, structure p. 33 fig., sp. p. 307 fig., *crassisepta*

p. 309 fig., *elliptica* p. 309 fig., sp. p. 309 fig., VAUGHAN & WELLS 105.—*Cyclolites* [sic] *heberti* p. 348, SABARIS 84.

†*Cyclolitopsis* diagnosed p. 135 fig., structure p. 33 fig., VAUGHAN & WELLS 105.

†*Cyclomussa* diagnosed p. 194, VAUGHAN & WELLS 105.

*Cycloseris* diagnosed p. 138, *discus* p. 141 fig., *cyclolites* p. 309 fig., *fragilis* pp. 309, 311 fig., *marginata* pp. 48, 310 fig., VAUGHAN & WELLS 105.

†*Cycloseris heberti* p. 223 fig., ALMELA, RÍOS & GARRIDO 6.—*C. barcelonensis* p. 326 fig., *duplucicosta* p. 330 fig., *perezi* p. 331 fig., *andianensis* p. 410, SABARIS 84.

†*Cymosmilia* diagnosed p. 221, *conferta* p. 340 fig., VAUGHAN & WELLS 105.

*Cyphastrea* [sic] diagnosed p. 174, *microphthalma* pp. 167, 322 fig., *serailia* p. 28 fig., VAUGHAN & WELLS 105.

†*Cystidendron* discussed p. 39, SMITH & YÜ 94.

†*Cystiphyllum spinulosum* p. 12 fig., *tubiforme* sp. n. p. 13 fig. Silurian North Greenland, POULSEN Medd. Grønland 72 2 1941.

†*Cystrorotration* discussed p. 39, SMITH & YÜ 94.

†*Dactylaraea* diagnosed p. 149, VAUGHAN & WELLS 105.

†*Dactylosmilia* discussed, *carantonensis* possibly a dendrophyllid p. 242, VAUGHAN & WELLS 105.

†*Dasmia* diagnosed p. 215, *sowerbyi* p. 338 fig., *neocomiensis* possibly a *Dasmiospis* p. 215, VAUGHAN & WELLS 105.

†*Dasmiospis* diagnosed p. 215, *Dasmia neocomiensis* possibly a *Dasmiospis* p. 215, *lamellicostata* p. 338 fig., VAUGHAN & WELLS 105.

*Dasmosmilia* diagnosed p. 186, *lymani* pp. 36, 326 fig., VAUGHAN & WELLS 105.

*Deltocyathoides* diagnosed p. 207, VAUGHAN & WELLS 105.

†*Deltocyathus whitei* sp. n. p. 200 fig. Paleocene California, DURHAM J. Paleont. Menasha Wis. 17 2 1943.—*D.* diagnosed p. 206, *italicus* p. 333 fig., VAUGHAN & WELLS 105.



†*Dendracis haidingeri* p. 395 fig., SABARIS 84.—*D.* diagnosed p. 107, *mammillosa* p. 300 fig., VAUGHAN & WELLS 105.

†*Dendraraea* diagnosed p. 151, VAUGHAN & WELLS 105.

*Dendrocora* (subgen. of *Cladocora*) diagnosed p. 172, VAUGHAN & WELLS 105.

*Dendrogyra* diagnosed p. 189, *cylindrus* p. 329 fig., VAUGHAN & WELLS 105.

*Dendrophyllia* diagnosed p. 237, *micranthus* p. 343 fig., *japonica* p. 343 fig., VAUGHAN & WELLS 105.

†*Dendrophyllia oldroydi* ? p. 201 fig., DURHAM 32.

*Dendrophylliida* suborder n. p. 233, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Dendrosmilium* diagnosed p. 218, VAUGHAN & WELLS 105.

†*Densiphyllum* discussed p. 124, *Densiphyllum* [sic] *minutum* p. 204 should probably be allowed to lapse, HILL 42.—*D.* discussed p. 81, HUDSON 51.

†*Dermoseris* diagnosed p. 148, *corymbosa* p. 313 fig., VAUGHAN & WELLS 105.

†*Dermosmilium* diagnosed p. 118, *crassa* p. 302 fig., VAUGHAN & WELLS 105.

†*Desmophyllia* diagnosed p. 165, VAUGHAN & WELLS 105.

*Desmophyllinae* subfam. n. (of *Caryophylliidae*) p. 214, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

*Desmophyllum* diagnosed p. 214, *cristagalli* p. 338 fig., VAUGHAN & WELLS 105.

†*Desmopsammia* diagnosed p. 241, VAUGHAN & WELLS 105.

†*Diblasus* diagnosed p. 183, VAUGHAN & WELLS 105.

†*Dibunophyllum profundum* p. 122, HUDSON & FOX 52.—*D. bourtonense* p. 127 fig., NEAVEYSON 75.—*D. bourtonense* probably synonymous with *bristolense* p. 443, WHITTARD & SMITH 110.

*Dichocoenia* diagnosed p. 189, *stokesi* p. 329 fig., VAUGHAN & WELLS 105.

†*Dichocoenia* diagnosed p. 189, *trechmanni* p. 329 fig., *D. (Psilogyra) telleri* p. 329 fig., VAUGHAN & WELLS 105.

*Dichocoeniinae* subfam. n. (of *Trochomiliidae*) p. 188, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Dictuophyllia* (subgen. of *Leptoria*) diagnosed p. 169, *crasso-lamellosa* p. 319 fig., VAUGHAN & WELLS 105.

†*Dictyaraea* not a hexacoral but possibly a stylasterid p. 350, VAUGHAN & WELLS 105.—*D. clinactinia* p. 373, *octopartita* p. 375 fig., SABARIS 84.

†*Digitium* p. 242, VAUGHAN & WELLS 105.

†*Dimorpharaea* diagnosed p. 149, *manchacaensis* p. 313 fig., VAUGHAN & WELLS 105.

†*Dimorphastrea* [sic] diagnosed p. 158, *lorioli* p. 317 fig., *crassisepta* p. 317 fig., VAUGHAN & WELLS 105.

†*Dimorphophyllia* diagnosed p. 124, *oxylopha* p. 303 fig., VAUGHAN & WELLS 105.

†*Dimorphoseris* diagnosed p. 132, *wachneri* p. 308 fig., VAUGHAN & WELLS 105.

†*Dimorphosmilium* diagnosed p. 158, VAUGHAN & WELLS 105.

†*Diphyphyllum* discussed p. 180, *smithi* nom. n. (pro *D. α = D. late-septatum* Smith partim non McCoy) p. 181 Lower Carboniferous Great Britain, *fasciculatum* p. 182 fig., *late-septatum* p. 184 fig., *furcatum* p. 185 fig., *ingens* sp. n. p. 186 fig. Lower Carboniferous Scotland, HILL Palaeontogr. Soc. (Monog.) London 1940.—*D. irregulare* possibly a *Permia* p. 365, HUDSON 48.—*D.* discussed p. 38, *D. ? vesicotabulatum* p. 54, SMITH & YÜ 94.

†*Diplaraea* diagnosed p. 133, VAUGHAN & WELLS 105.

†*Diplhelia* diagnosed p. 183, *papillosa* p. 325 fig., VAUGHAN & WELLS 105.

*Diploastrea* [sic] diagnosed p. 137, *heliopora* p. 304 fig., VAUGHAN & WELLS 105.

†*Diploastrea* [sic] diagnosed p. 137, *harrisi* p. 304 fig., VAUGHAN & WELLS 105.

†*Diplocoenia* diagnosed p. 168, VAUGHAN & WELLS 105.

†*Diploctenium* diagnosed p. 187, *haidingeri* p. 327 fig., *contortum* p. 327 fig., VAUGHAN & WELLS 105.

†*Diplogyra* diagnosed p. 112, VAUGHAN & WELLS 105.

*Diploria* diagnosed p. 166, *strigosa* p. 319 fig., *labyrinthiformis* p. 319 fig., *clivosa* p. 319 fig., VAUGHAN & WELLS 105.

†*Diplotheustra* a synonym of *Amphiasirea* [sic] p. 231, VAUGHAN & WELLS 105.

†*Disaraea* diagnosed p. 148, VAUGHAN & WELLS 105.

†*Discocoenia* diagnosed p. 230, VAUGHAN & WELLS 105.

†*Discocyathus* diagnosed p. 201, morphogeny of corallum p. 200 fig., *eudesi* p. 333 fig., VAUGHAN & WELLS 105.

†*Discoseris* possibly a procyclotitid p. 242, VAUGHAN & WELLS 105.

*Discosoma nummiforme* p. 10 fig., *daueydorffi* sp. n. p. 11 fig. Macclesfield Bank, CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.

†*Discotrochus* diagnosed p. 139, *orbignyianus* p. 329 fig., VAUGHAN & WELLS 105.

†*Dominicotrochus* diagnosed p. 213, *dominicensis* p. 337 fig., VAUGHAN & WELLS 105.

†*Donacosmilia* diagnosed p. 230, VAUGHAN & WELLS 105.

*Duncanopsammia* diagnosed p. 241, *azifuga* pp. 342, 343 fig., VAUGHAN & WELLS 105.

†*Dungulia* diagnosed p. 217, VAUGHAN & WELLS 105.

*Dunocyathus* diagnosed p. 177, VAUGHAN & WELLS 105.

*Echinophyllia* diagnosed p. 197, *aspera* pp. 197, 332 fig., *magna* p. 332 fig., VAUGHAN & WELLS 105.

*Echinopora* diagnosed p. 175, *lamellosa* p. 322 fig., VAUGHAN & WELLS 105.

*Edwardsia annamensis* sp. n. p. 19 fig. Annam and Siam, CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.

†*Elasmocoenia* diagnosed p. 312, VAUGHAN & WELLS 105.

†*Elasmophyllia* diagnosed p. 161, *deformis* p. 317 fig., VAUGHAN & WELLS 105.

†*Elephantaria* diagnosed p. 151, *lindstroemi* p. 314 fig., VAUGHAN & WELLS 105.

†*Ellipsosmilia* diagnosed p. 232, VAUGHAN & WELLS 105.

†*Elliptoseris* diagnosed p. 122, VAUGHAN & WELLS 105.

†*Elysastraea* diagnosed p. 158, VAUGHAN & WELLS 105.

†*Enallhelia* diagnosed p. 113, *elegans* p. 301 fig., *tubulosa* p. 301 fig., VAUGHAN & WELLS 105.

*Enallopsammia* diagnosed p. 240, *rostrata* p. 342 fig., VAUGHAN & WELLS 105.

†*Endopachys* diagnosed p. 236, *maclurii* p. 342 fig., VAUGHAN & WELLS 105.

*Endopsammia* diagnosed p. 238, *microcardia* p. 342 fig., VAUGHAN & WELLS 105.

†*Eomontipora* not a hexacoral but a porifer p. 351, VAUGHAN & WELLS 105.

†*Epistreptophyllum* diagnosed p. 118, *typicum* p. 302 fig., VAUGHAN & WELLS 105.

†*Epitrochus* possibly a caryophyllid p. 242, VAUGHAN & WELLS 105.

*Epizoanthus* on hermit crab p. 69 fig., PEARSE 80.

†*Eridophyllum* discussed p. 41, SMITH & YÜ 94.

†*Erismatolithus* *Madreporites affinis* —see *Lithostrotion*.

†*Euhelia* diagnosed p. 113, VAUGHAN & WELLS 105.

*Euheliinae* subfam. n. (of *Stylinidae*) p. 113, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

*Euphyllia* diagnosed p. 219, *glabrescens* pp. 294, 339 fig., VAUGHAN & WELLS 105.

†*Euphyllia pachecoi* sp. n. p. 405 fig. Eocene Spain, SABARIS Mem. Acad. Cienc. Barcelona (3) 26 9 1942.

†*Eupsammia* (subgen. of *Balano-phyllia*) diagnosed p. 236, *trochiformis* pp. 335, 342 fig., VAUGHAN & WELLS 105.

†*Euryphyllum reidi* p. 61 fig., ? *E. sp.* p. 62 fig., HILL 44.

*Eusmilia* diagnosed p. 220, *fastigiata* p. 339 fig., VAUGHAN & WELLS 105.

*Eusthenotrochus* (subgen. of *Sphenotrochus*) diagnosed p. 212, *granulosus* p. 337 fig., *gilchristi* p. 337 fig., VAUGHAN & WELLS 105.

†*Eusthenotrochus* (subgen. of *Sphenotrochus*) diagnosed p. 212, *granulosus* p. 337 fig., VAUGHAN & WELLS 105.

†*Ewaldocoenia* diagnosed p. 110, VAUGHAN & WELLS 105.

†*Fasciculophyllum* discussed p. 130, *eruca* p. 132 fig., *carruthersi* sp. n. p. 134 fig. Lower Carboniferous Scotland, HILL Palaeontogr. Soc. (Monog.) London 1940.—*F. thomsoni* sp. n. p. 105 fig. Lower Carboniferous Yorkshire, HUDSON & FOX Proc. Yorks. Geol. Soc. 25 2 1943.

*Favia* diagnosed p. 166, *kululensis* pp. 15, 28 fig., *doreyensis* p. 15 fig., *bertholleti* p. 17 fig., *farus* nematocysts p. 29 fig., *fragum* p. 318 fig., VAUGHAN & WELLS 105.

†*Favia costata* p. 301, *almerai* p. 302 fig., *banzai* p. 303 fig., SABARIS 84.

Faviida suborder n. p. 153, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

Faviinae subfam. n. (of Faviidae) p. 162, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

*Favites* diagnosed p. 167, *pentagonus* p. 17 fig., *affinis* p. 167 fig., *abdit* p. 318 fig., VAUGHAN & WELLS 105.

†*Felixastraea* diagnosed p. 131, *zitteli* p. 308 fig., VAUGHAN & WELLS 105.

†*Felixigyra* diagnosed p. 112, VAUGHAN & WELLS 105.

†*Ferrya* diagnosed p. 120, VAUGHAN & WELLS 105.

*Flabelloidae* superfam. n. p. 226, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Flabellasmilia* diagnosed p. 187, *subcarinata* p. 327 fig., VAUGHAN & WELLS 105.

*Flabellum* diagnosed p. 226, structure p. 14 fig., *pavoninum* p. 341 fig., var. *parapavoninum* p. 341 fig., *alabastrum* p. 341 fig., VAUGHAN & WELLS 105.

†*Flabellum clarki* sp. n. p. 291 fig. Eocene California, BENTSON J. Paleont. Menasha Wis. 17 3 1943.—*F. californicum* p. 196, var. *fiedleri* var. n. p. 196 fig. Middle Eocene California, *remondianum* p. 196 fig., *fresnoense* sp. n. p. 197 fig. Cretaceous California, *oregonense* sp. n. p. 198 fig. Lower Oligocene Oregon, *stantoni* nom. n. (pro *remondianum* Vaughan non Gabb) p. 199 fig. Eocene California, *F. ? sp.* p. 199 fig., DURHAM J. Paleont. Menasha Wis. 17 2 1943.—*F. cf. bellardii* p. 416 fig., SABARIS 84.—*F.* diagnosed p. 226, *rhomboideum* p. 341 fig., VAUGHAN & WELLS 105.

*Fragilocyathus* diagnosed p. 225, VAUGHAN & WELLS 105.

†*Fromentellia* diagnosed p. 159, VAUGHAN & WELLS 105.

*Fungia* diagnosed p. 140, structure p. 33 fig., development p. 48 fig., *echinata* pp. 141, 309 fig., *danai* p. 141 fig., *fungites* p. 143 fig., *crassitentaculata* p. 294 fig., sp. p. 307 fig., *repanda* pp. 141, 307 fig., *scutaria* pp. 141, 310 fig., *actiniformis* p. 143 fig., VAUGHAN & WELLS 105.

†*Fungia* diagnosed p. 140, *actiniformis* var. *sudanensis* p. 310 fig., VAUGHAN & WELLS 105.

*Fungiacyathus* diagnosed p. 144, *symmetricus* p. 326 fig., VAUGHAN & WELLS 105.

Fungioidae superfam. n. p. 130, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Fungophyllia* diagnosed p. 197, genoelectotype chosen *monstrosa* p. 197 Miocene Borneo, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

*Galaxea* diagnosed p. 184, sp. p. 295 fig., *fascicularis* pp. 29, 325 fig., VAUGHAN & WELLS 105.

Galaxeinae subfam. n. (of Oculinidae) p. 184, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

*Gardineria* diagnosed p. 227, *hawaiiensis* p. 341 fig., VAUGHAN & WELLS 105.

*Gemmulatrochus* diagnosed p. 215, VAUGHAN & WELLS 105.

†*Genabacia* diagnosed p. 147, VAUGHAN & WELLS 105.

- †*Gigantostylis* diagnosed p. 115, *epigonus* p. 302 fig., VAUGHAN & WELLS 105.
- †*Glenaraea* possibly not a hexacoral p. 242, VAUGHAN & WELLS 105.
- Goniastrea* as *Goniastrea* [sic] diagnosed p. 167, *solida* p. 21 fig., *pectinata* p. 318 fig., VAUGHAN & WELLS 105.
- †*Goniastrea alpina* p. 304, SABARÍS 84.
- †*Goniocora* diagnosed p. 173, VAUGHAN & WELLS 105.
- Goniocorella* diagnosed p. 218, *dumosa* p. 338 fig., VAUGHAN & WELLS 105.
- Goniopora* diagnosed p. 152, *duofaciata* p. 314 fig., VAUGHAN & WELLS 105.
- †*Goniopora ameliana* p. 396, *katzeri* p. 397 fig., *rudis* p. 398, *elegans* p. 398 fig., SABARÍS 84.
- †*Gonioseris* a ? calamophylliid p. 242, VAUGHAN & WELLS 105.
- †*Gosaviaraea* diagnosed p. 150, VAUGHAN & WELLS 105.
- †*Gravieropsammia* diagnosed p. 107, VAUGHAN & WELLS 105.
- †*Grumiphyllia* diagnosed p. 164, VAUGHAN & WELLS 105.
- Gwynia* diagnosed p. 224, *inflata* p. 341 fig., VAUGHAN & WELLS 105.
- †*Gyrodendron* diagnosed p. 119, *lobatum* p. 302 fig., VAUGHAN & WELLS 105.
- †*Gyroseris* diagnosed p. 122, VAUGHAN & WELLS 105.
- Gyrosmlia* diagnosed p. 219, VAUGHAN & WELLS 105.
- †*Haimesiastrea conferta* p. 192 fig., WASEM & WILBERT 107.—*H.* diagnosed p. 222, *conferta* p. 297 fig., VAUGHAN & WELLS 105.
- Haimesiastreaeidae fam. n. p. 222, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.
- Halomitra* diagnosed p. 142, *pileus* p. 143 fig., *philippinensis* p. 311 fig., VAUGHAN & WELLS 105.
- †*Haplaraea* diagnosed p. 133, *pratzi* pp. 307, 308 fig., VAUGHAN & WELLS 105.
- Haplaraeidae fam. n. p. 132, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.
- †*Haplohelia* diagnosed p. 182, *gracilis* p. 325 fig., VAUGHAN & WELLS 105.
- †*Heliocoenia* (sub-genus of *Stylina*) diagnosed p. 112, *corallina* p. 301 fig., VAUGHAN & WELLS 105.
- †*Heliophyllum halli* p. 95 fig., WELLS 109.
- †*Heptastylis* not a hexacoral but possibly a stromatoporoid p. 353, VAUGHAN & WELLS 105.
- †*Heptastylopsis* not a hexacoral but possibly a stromatoporoid p. 353, VAUGHAN & WELLS 105.
- Herpolitha* diagnosed p. 142, *limax* pp. 36, 307 fig., *stricta* p. 310 fig., *foliosa* p. 310 fig., VAUGHAN & WELLS 105.
- Heteranthus insignis* sp. n. p. 30 fig., Poulo Condore, *verruculatus* p. 31 fig., CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.
- †*Heterastrea* diagnosed p. 156, genoelectotype chosen *tomesi* p. 156 Lias England, *haimi* p. 316 fig., VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.
- †*Heterocoenia* diagnosed p. 110, *provincialis* p. 301 fig., *verrucosa* p. 301 fig., VAUGHAN & WELLS 105.
- Heterocyathus* diagnosed p. 207, *rousseauus* p. 333 fig., *aequicostatus* p. 333 fig., VAUGHAN & WELLS 105.
- †*Heterogyra* diagnosed p. 124, *lobata* p. 303 fig., VAUGHAN & WELLS 105.
- †*Heterophrentis venezuelensis* p. 97 fig., WELLS 109.
- †*Heterophyllia* discussed p. 196, *grandis* p. 198 fig., *ornata* p. 199 fig., *granulata* p. 199 fig., aff. *granulata* p. 200 fig., *phillipsi* p. 201 fig., *angulata* p. 202 fig., HILL 42.—*H. granulata*, *angulata* p. 121, HUDSON & FOX 52.
- †*Heteropsammia* diagnosed p. 240, *melchlini* p. 342 fig., VAUGHAN & WELLS 105.
- †*Hexaphyllia* discussed p. 202, *m'coyi* p. 203, *marginata* p. 203 fig., *mirabilis* p. 204, HILL 42.
- †*Hindesastra* diagnosed p. 179, *discoidea* p. 323 fig., VAUGHAN & WELLS 105.
- †*Holaraea* not a hexacora p. 353, VAUGHAN & WELLS 105.



†*Holcotrochus* diagnosed p. 214, *scriptus* p. 337 fig., VAUGHAN & WELLS 105.

†*Holocystis* (subgen. of *Cyathophora*) diagnosed p. 110, VAUGHAN & WELLS 105.

*Hoplungia* (subgen. of *Astrangia*) diagnosed p. 178, VAUGHAN & WELLS 105.

*Hormathia andersoni*, *coronata* may be *Hormathianthus* p. 33, CARLGREN 20.

*Hormathianthus* gen. n. (fam. Hormathiidae) p. 33, genotype (by monotypy) *tuberculatus* sp. n. p. 33 fig. Annam, etc., CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.—See also *Hormathia*.

*Hydnophora* diagnosed p. 169, *exesa* p. 320 fig., *microconos* p. 320 fig., VAUGHAN & WELLS 105.

†*Hydnophora venusta* p. 318 fig., SABARIS 84.—*H.* diagnosed p. 169, *styriana* p. 320 fig., VAUGHAN & WELLS 105.

†*Hydnophorabacia* diagnosed p. 123, VAUGHAN & WELLS 105.

†*Hydnophyllia macrogyra* p. 305 fig., *michelotti* p. 309 fig., forma *bicarenata* p. 311, *profunda* p. 312, *scalaria* p. 315 fig., SABARIS 84.

†*Idiotrochus* diagnosed p. 212, *emarciatus* p. 337 fig., VAUGHAN & WELLS 105.

†*Indophyllia* diagnosed p. 170, VAUGHAN & WELLS 105.

†*Indosmilia* diagnosed p. 164, VAUGHAN & WELLS 105.

†*Isastraea cvejici* p. 393 fig., SABARIS 84.—*Isastrea* [sic] diagnosed p. 120, *bonanomii* p. 302 fig., VAUGHAN & WELLS 105.

†*Isastrocoenia* diagnosed p. 104, VAUGHAN & WELLS 105.—*I. lobata* f. 41 fig., WELLS 108.

*Isocora* discussed p. 243, VAUGHAN & WELLS 105.

*Isophyllastraea* diagnosed p. 195, VAUGHAN & WELLS 105.

*Isophyllia* diagnosed p. 195, *sinuosa* p. 331 fig., VAUGHAN & WELLS 105.

*Kionotrochus* diagnosed p. 213, *suteri* p. 337 fig., VAUGHAN & WELLS 105.

†*Koilocoenia* diagnosed p. 102, *deci piens* p. 102 fig., VAUGHAN & WELLS 105.

†*Koilogra* diagnosed p. 221, VAUGHAN & WELLS 105.

†*Koninkophyllum talonatum* sp. n. p. 129 fig. Lower Carboniferous Arkansas, EASTON J. Paleont. Menasha Wis. 17 2 1943.—*K. echinatum* p. 122 fig., cf. *K. echinatum* p. 123, HUDSON & FOX 52.—*K.* discussed p. 201, JEFFORDS 56.

†*Kraterostrobilos* a caryophylliid or flabellid p. 243, VAUGHAN & WELLS 105.

†*Kühnophyllia* diagnosed p. 123, *centrifuga* p. 303 fig., VAUGHAN & WELLS 105.

†*Laccophyllum cyathaxoniaeformis* a species of *Permia* p. 366 fig., HUDSON 48.

†*Lamellastraea* diagnosed p. 168, VAUGHAN & WELLS 105.

†*Lasmogyra* diagnosed p. 161, *tortuosa* p. 317 fig., VAUGHAN & WELLS 105.

*Lasmogyrinae* subfam. n. (of Montlivaltiidae) p. 160, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Lasmosmilia* diagnosed p. 160, VAUGHAN & WELLS 105.

†*Laterophyllia* diagnosed p. 164, VAUGHAN & WELLS 105.

†*Latimaecandra undans* possibly a *Microphyllia* p. 44, WELLS 108.

†*Latiphyllia* diagnosed p. 159, *suevica* p. 317 fig., VAUGHAN & WELLS 105.

†*Latomeandra* [sic] diagnosed p. 119, *plicata* p. 302 fig., VAUGHAN & WELLS 105.

†*Latusastrea* [sic] diagnosed p. 231, *alveolaris* p. 316 fig., VAUGHAN & WELLS 105.

*Leipsicerias valens* sp. n. p. 28 fig. Goto Islands, CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.

†*Lepiconus* internal moulds of procycolitid corals p. 243, VAUGHAN & WELLS 105.

†*Lepidophyllia* diagnosed p. 155, VAUGHAN & WELLS 105.

*Leptastrea* [sic] diagnosed p. 174, *bottae* p. 322 fig., VAUGHAN & WELLS 105.

†*Leptaxis bilobata* p. 294, SABARIS 84.

†*Leptocyathus* diagnosed p. 207, *elegans* p. 334 fig., VAUGHAN & WELLS 105.

†*Leptomussa variabilis* p. 319, SABARIS 84.—*L.* diagnosed p. 194, *variabilis* pp. 192, 330 fig., VAUGHAN & WELLS 105.

*Leptopenus* diagnosed p. 146, *discus* p. 312 fig., *hypocoelus* p. 312 fig., VAUGHAN & WELLS 105.

†*Leptophyllastraea* diagnosed p. 131, *regularis* p. 308 fig., VAUGHAN & WELLS 105.

†*Leptophyllia felixi* p. 350 fig., *pironai* p. 352, *dubravitzensis* p. 414, SABARIS 84.—*L.* diagnosed p. 131, structure p. 33 fig., *clavata* p. 307 fig., *conclavina* p. 308 fig., *clava* p. 308 fig., VAUGHAN & WELLS 105.

*Leptoria* diagnosed p. 169, *gracilis* p. 319 fig., VAUGHAN & WELLS 105.

†*Leptoria* diagnosed p. 169, *L. (Dictyophyllia) crasso-lamellosa* p. 319 fig., VAUGHAN & WELLS 105.

*Leptoseris* diagnosed p. 125, *hawaiiensis* p. 304 fig., VAUGHAN & WELLS 105.

*Levipalifer* (subgen. of *Deltocyathus*) diagnosed p. 206, VAUGHAN & WELLS 105.

*Lithophyllon* diagnosed p. 140, *lobata* p. 309 fig., VAUGHAN & WELLS 105.

†*Lithostrotion* discussed p. 165, *pauciradiale* p. 169 fig., *irregulare* p. 170, *juncum* p. 171 fig., *scoticum* sp. n. p. 173 fig. Lower Carboniferous Scotland, *proliferum* p. 174 fig., *clavaticum* p. 176 fig., *decipiens* p. 178 fig., sp. p. 180 fig., HILL Palaeontogr. Soc. (Monog.) London 1940.—*L.* sp. p. 126 fig., NEAVESON 75.—*L.* discussed p. 38, *maccoyanum* p. 38 fig., SMITH & YÜ 94.—*L.* spp., *juncum* p. 444, *martini* possibly synonymous with *irregulare* Phillips non Edwards & Haime and with *Erismatolithus Madreporites affinis* p. 444 fig., WHITTARD & SMITH 110.

†*Lithostrotionella* related to *Lonsdaleia* p. 43, *tubifera* discussed p. 42, SMITH & YÜ 94.

*Lobophyllia* diagnosed p. 194, *robusta* p. 330 fig., VAUGHAN & WELLS 105.

†*Lobopsammia* diagnosed p. 237, VAUGHAN & WELLS 105.

†*Lochmacosmilia* gen. n. (fam. Amphiphragmidae) p. 48, genotype (by original designation) *Stylosmilia trapeziformis* p. 48 Middle Jurassic Cutch, *koniakensis* p. 48, *aethiopica* sp. n. p. 49 fig. Upper Jurassic Ethiopia, WELLS Bull. Amer. Mus. nat. Hist. N.Y. 82 2 1943.

*Lochmaetrochus* diagnosed p. 208, VAUGHAN & WELLS 105.

†*Lonsdaleia major* p. 135 fig., *minor* p. 135 fig., spp. n. Lower Carboniferous Arkansas, EASTON J. Paleont. Menasha Wis. 17 2 1943.—*L.* discussed p. 151, *duplicata* var. *duplicata* p. 153 fig., var. *altonensis* p. 153, *caledonia* p. 154 fig., *floriformis* var. *floriformis* p. 155 fig., near *laticlavia* p. 156, var. *crassiconus* p. 156 fig., HILL 42.—*L. indica* synonymous with *L. virgalensis* p. 9 fig., SEN 89.—*L. canalifera* p. 35 fig., SEN 90.—See also *Waagenophyllum*.

†*Lophamplexus* discussed p. 210, JEFFORDS 56.

*Lophelia* diagnosed p. 215, *prolifera* p. 343 fig., VAUGHAN & WELLS 105.

†*Lophocarinophyllum* discussed p. 208, JEFFORDS 56.

†*Lophophyllidium* discussed pp. 201, 211, *proliferum* p. 213 fig., neotype chosen p. 215, *profundum* ? p. 219 fig., *confertum* sp. n. p. 221 fig., *mundulum* sp. n. p. 223 fig., Pennsylvanian Oklahoma, *compressum* sp. n. p. 224 fig., Pennsylvanian Texas, *complexum* sp. n. p. 227 fig. Pennsylvanian Oklahoma, *murale* sp. n. p. 228 fig. Pennsylvanian Kansas, *expansum* sp. n. p. 229 fig. Pennsylvanian Missouri and Kansas, *girtyi* sp. n. p. 232 fig., *elongatum* sp. n. p. 234 fig., Pennsylvanian Oklahoma, *radiatum* sp. n. p. 236 fig. Pennsylvanian Kansas, *magnificum* sp. n. p. 238 fig., *newelli* sp. n. p. 242 fig., Pennsylvanian Oklahoma, *distinctum* sp. n. p. 243 fig. Pennsylvanian Kansas, *minutum* sp. n. p. 246 fig. Pennsylvanian Oklahoma, sp. A p. 247 fig., sp. B p. 250 fig., JEFFORDS State Geol. Surv. Kansas Bull. 41 5 1942.

†*Lophophyllum* discussed p. 201, JEFFORDS 56.

*Lophosmilia* diagnosed p. 204, VAUGHAN & WELLS 105.

*Madracis* diagnosed p. 106, *decactis* p. 102 fig., *mirabilis* p. 297 fig., *asperula* p. 297 fig., *myriaster* p. 297 fig., VAUGHAN & WELLS 105.

†*Madracis wellsii* sp. n. p. 295 fig. Eocene California, BENTSON J. Paleont. Menasha Wis. 17 3 1943.—*M.* diagnosed p. 106, *herricki* p. 297 fig., VAUGHAN & WELLS 105.

*Madrepora* diagnosed p. 183, *galapagensis* p. 325 fig., VAUGHAN & WELLS 105.

†*Maeandraraea somalica* a *Microphyllia* p. 43, *kenyense* possibly a *Microphyllia* p. 44, WELLS 108.

†*Maeandroseris* diagnosed p. 127, VAUGHAN & WELLS 105.

†*Maeandrostylis* diagnosed p. 156, VAUGHAN & WELLS 105.

†*Maia* gen. n., genotype *cylindrica* sp. n. Silurian Japan, SUGIYAMA Sci. Rep. Tôhoku Imp. Univ. (2) 21 1940 [not seen].

†*Malonophyllum* discussed p. 210, JEFFORDS 56.

*Manicina* diagnosed p. 171, *areolata* pp. 24-26, 296 fig., VAUGHAN & WELLS 105.

†*Margarastraea* diagnosed p. 159, VAUGHAN & WELLS 105.

†*Margarophyllia* diagnosed p. 115, VAUGHAN & WELLS 105.

†*Margarosmilia* diagnosed p. 116, *septanectens* p. 302 fig., *zieteni* p. 302 fig., VAUGHAN & WELLS 105.

†*Meandrastrea* [sic] diagnosed p. 161, VAUGHAN & WELLS 105.

*Meandrina* [sic] diagnosed p. 188, *brasiliensis* p. 328 fig., *meandrites* [sic] p. 328 fig., VAUGHAN & WELLS 105.

†*Meandrina* [sic] diagnosed p. 188, *alveolus* p. 329 fig., *barretti* p. 329 fig., VAUGHAN & WELLS 105.

*Meandrininae* [sic] subfam. n. (of *Trochomiliidae*) p. 186, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Meandrophyllia* [sic] diagnosed p. 149, *gressleyi* p. 313 fig., VAUGHAN & WELLS 105.

*Merulina* diagnosed p. 190, *ampliata* pp. 190, 322, 330 fig., VAUGHAN & WELLS 105.

†*Mesomorpha forojuliensis* p. 345 fig., *hemisphaerica* p. 346 fig., *schweinfurthi* p. 412, SABARIS 84.

*Metapeachia* gen. n. p. 22, genotype (by original designation) *Peachia tropica* Pannikar p. 22, CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.

*Metarhodactis* gen. n. p. 18, genotype (by monotypy) *boninensis* sp. n. p. 18 fig. Bonin Islands, CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.

†*Micrabacia* diagnosed p. 145, *fungulus* p. 312 fig., *rotatilis* p. 312 fig., *mineolensis* p. 312 fig., VAUGHAN & WELLS 105.

†*Microphyllia* diagnosed p. 121, *soemmeringii* p. 302 fig., VAUGHAN & WELLS 105.—*M. somalica* p. 43 fig., possibly genus for *Latimaecandra undans* (Etallon) Zuffardi-Comerci p. 44, and *Maeandraraea kenyense* Gregory p. 44, and *Thamnastraea arachnoides* var. *minor* De Angelis p. 44, WELLS 108.

†*Microsmilia* diagnosed p. 224, VAUGHAN & WELLS 105.

†*Microsolena* diagnosed p. 148, *fromenteli* p. 313 fig., VAUGHAN & WELLS 105.

†*Microtrochus* immature flabellid corals p. 243, VAUGHAN & WELLS 105.

†*Mirmidia* p. 243, VAUGHAN & WELLS 105.

†*Mitrodendron* diagnosed p. 231, *schaferi* p. 316 fig., VAUGHAN & WELLS 105.

†*Miyakosmilia* diagnosed p. 110, VAUGHAN & WELLS 105.

*Monomyces* diagnosed p. 227, *typus* p. 341 fig., VAUGHAN & WELLS 105.

*Montastraea* as *Montastrea* [sic] diagnosed p. 173, *annularis* p. 321 fig., *cavernosa* var. *compacta* p. 321 fig., VAUGHAN & WELLS 105.

†*Montastraea* sp. aff. *lifoliana* p. 45 fig., WELLS 108.

*Montastreinae* subfam. n. (of *Favidae*) p. 171, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

*Montigyra* diagnosed p. 171, VAUGHAN & WELLS 105.

*Montipora* diagnosed p. 108, *cocosensis* p. 300 fig., VAUGHAN & WELLS 105.

†*Montlivaltia* p. 157, *nathheimiensis* p. 317 fig., *matheyi* p. 317 fig., VAUGHAN & WELLS 105.

Montlivaltiinae subfam. n. (of Montlivaltiidae) p. 157, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

*Moseleya* diagnosed p. 170, VAUGHAN & WELLS 105.

†*Multicolumnastraea* diagnosed p. 174, *cyathiformis* p. 322 fig., VAUGHAN & WELLS 105.

*Mussa* diagnosed p. 195, *angulosa* pp. 192, 331 fig., sp. p. 324 fig., VAUGHAN & WELLS 105.

*Mussismilia* diagnosed p. 193, *braziliensis* p. 192 fig., *harttii* p. 192 fig., VAUGHAN & WELLS 105.

*Mycedium* diagnosed p. 198, *tubifer* pp. 197, 332 fig., *tenuicostatum* p. 332 fig., VAUGHAN & WELLS 105.

†*Mycetaraea* diagnosed p. 148, VAUGHAN & WELLS 105.

*Mycetophyllia* diagnosed p. 196, VAUGHAN & WELLS 105.

†*Mycetophyllopsis* diagnosed p. 160, *antiqua* p. 317 fig., VAUGHAN & WELLS 105.

†*Mycoseris hypocrateriformis* p. 342, SABARIS 84.—*M.* diagnosed p. 123, *irradians* p. 303 fig., VAUGHAN & WELLS 105.

†*Myriophyllia* diagnosed p. 312, *angustata* p. 301 fig., *thurmanni* p. 301 fig., VAUGHAN & WELLS 105.

*Napopora* (subgen. of *Porites*) diagnosed p. 153, VAUGHAN & WELLS 105.

†*Nefocoenia* diagnosed p. 166, *lobata* p. 319 fig., VAUGHAN & WELLS 105.

†*Nefophyllia* diagnosed p. 187, *multicincta* p. 326 fig., VAUGHAN & WELLS 105.

*Nemanthus annamensis* sp. n. p. 36 fig., Annam and Siam, CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.

†*Nemistium* discussed p. 39, SMITH & YÜ 94.—*N. edmonsi* p. 445, WHITTARD & SMITH 110.

*Neohelia* diagnosed p. 183, *porcellana* p. 325 fig., VAUGHAN & WELLS 105.

†*Nipponophyllum* gen. n., *giganteum*, *yabei* spp. n., Silurian Japan, SUGIYAMA Sci. Rep. Tôhoku Imp. Univ. (2) 21 1940 [not seen].

*Notocyathus* diagnosed p. 214, VAUGHAN & WELLS 105.

*Notophyllia* diagnosed p. 237, *etheridgii* p. 342 fig., VAUGHAN & WELLS 105.

*Oculina* diagnosed p. 181, *varicosa* p. 324 fig., *diffusa* p. 325 fig., VAUGHAN & WELLS 105.

Oculininae subfam. n. (of Oculinidae) p. 180, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

*Odontocyathus* (subgen. of *Stephanocyathus*) diagnosed p. 208, *coronatus* p. 334 fig., VAUGHAN & WELLS 105.

†*Ogilviastraea* diagnosed p. 168, VAUGHAN & WELLS 105.

†*Onchotrochus* diagnosed p. 224, VAUGHAN & WELLS 105.

†*Oppelismilia* diagnosed p. 155, *rugosa* p. 155 fig., *mucronata* p. 155 fig., *rudis* p. 316 fig., VAUGHAN & WELLS 105.

†*Orbicella friulana* p. 298 fig., *guetardi* p. 299, *defrancei* p. 408, SABARIS 84.

†*Orionastraea* discussed p. 187, *philipsii* p. 189 fig., HILL 42.—*O.* discussed p. 40, SMITH & YÜ 94.

*Oulangia* diagnosed p. 178, VAUGHAN & WELLS 105.

*Oulastrea* [sic] diagnosed p. 125, VAUGHAN & WELLS 105.

*Oulophyllia* diagnosed p. 169, *aspera* p. 320 fig., VAUGHAN & WELLS 105.

†*Ovalastrea* [sic] diagnosed p. 120, *caryophylloides* p. 302 fig., *bihinensis* p. 302 fig., VAUGHAN & WELLS 105.

*Oxypora* diagnosed p. 197, *lacera* pp. 197, 332 fig., VAUGHAN & WELLS 105.

*Oxysmilia* diagnosed p. 204, VAUGHAN & WELLS 105.

†*Pachygyra* diagnosed p. 188, *princeps* p. 327 fig., VAUGHAN & WELLS 105.

*Pachyseris* diagnosed p. 125, *speciosa* p. 304 fig., VAUGHAN & WELLS 105.

†*Palaeastraea* diagnosed p. 158, VAUGHAN & WELLS 105.

†*Palaeophyllum* see *Columnaria*.

†*Palaeopsammia* diagnosed p. 235, *multiformis* p. 342 fig., VAUGHAN & WELLS 105.



†*Palaeosmilia compressa* sp. n. p. 279 fig. Lower Carboniferous Tennessee, DURHAM J. Paleont. Menasha Wis. 17 3 1943.—*P.* discussed p. 116, *murchisoni* p. 117 fig., *regia* p. 121 fig., HILL 42.

†*Palastrea carbonaria* ? is *Palaeosmilia compressa* (q.v.) p. 279 fig., EASTON 34.

*Palauphyllia* (subgen. of *Lobophyllia*) diagnosed p. 195, VAUGHAN & WELLS 105.

*Paracadus* a nomen nudum p. 357, VAUGHAN & WELLS 105.

*Paracondylactis dawydoffi* sp. n. p. 27 fig. Poulo Condore, CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.

*Paracyathus* diagnosed p. 206, *de-fillipi* p. 333 fig., sp. p. 333 fig., VAUGHAN & WELLS 105.

†*Paracyathus* diagnosed p. 206, *procumbens* p. 333 fig., VAUGHAN & WELLS 105.

†*Paracycloseris* diagnosed p. 135, *elizabethae* p. 309 fig., VAUGHAN & WELLS 105.

*Paradeltoocyathus* (subgen. of *Citharoocyathus*) diagnosed p. 211, VAUGHAN & WELLS 105.

*Parahalomitra* diagnosed p. 142, *irregularis* p. 143 fig., *robusta* p. 311 fig., VAUGHAN & WELLS 105.

†*Parasmilia acutecristata* p. 363, SABARIS 84.—*P.* diagnosed p. 217, morphogeny of corallum p. 200 fig., *centralis* p. 338 fig., VAUGHAN & WELLS 105.

Parasmiliinae subfam. n. (of Caryophylliidae) p. 216, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Pattalophyllia bilobata* p. 279, *costata* p. 281, *cycloplitoides* p. 283 fig., *dilatata* p. 288, *sinuosa* p. 290 fig., SABARIS 84.—*P.* diagnosed p. 136, *gnatae* p. 136 fig., VAUGHAN & WELLS 105.

*Pavona* diagnosed p. 124, *maldivensis* p. 303 fig., *decussata* p. 303 fig., *P. (Polyastra) obtusata* p. 303 fig., VAUGHAN & WELLS 105.

*Peachia mira* sp. n. p. 20 fig. Annam, *tropica* made the genotype of *Metapeachia* (q.v.) p. 22, CARLGREN K. svenska Vetensk. Akad. Handl. (3) 20 6 1943.

*Pectinia* diagnosed p. 198, *lactuca* p. 332 fig., VAUGHAN & WELLS 105.

Pectiniidae fam. n. p. 196, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Peplosmilia* diagnosed p. 161, VAUGHAN & WELLS 105.

*Peponocyathus* (subgen. of *Trochocyathus*) diagnosed p. 205, *variabilis* p. 333 fig., VAUGHAN & WELLS 105.

†*Periseris* diagnosed p. 120, VAUGHAN & WELLS 105.

†*Permia cavernula* sp. n. p. 362 fig. Lower Carboniferous England, aff. *cavernula* p. 365, *P. [Laccophyllum] cyathaxoniaeformis* p. 366 fig., *carbonaria* p. 366 fig., *caverna* p. 366 fig., HUDSON Ann. Mag. nat. Hist. (11) 10 1943.—*P.* discussed p. 42, SMITH & YÜ 94.

†*Peruviastrea* [sic] diagnosed p. 223, VAUGHAN & WELLS 105.

†*Petrophyllia* an indeterminate dendrophylliid p. 243, VAUGHAN & WELLS 105.

†*Petrophylliella bilobata* p. 294 fig., *callifera* p. 297 fig., SABARIS 84.—*P.* diagnosed p. 164, VAUGHAN & WELLS 105.

*Phyllangia* diagnosed p. 178, VAUGHAN & WELLS 105.

†*Phyllogyra* diagnosed p. 159, VAUGHAN & WELLS 105.

†*Phylloseris* diagnosed p. 117, VAUGHAN & WELLS 105.

†*Phyllosmilia* diagnosed p. 187, *transiens* p. 327 fig., *costata* p. 327 fig., VAUGHAN & WELLS 105.

*Physogyra* diagnosed p. 219, *somaliensis* p. 329 fig., VAUGHAN & WELLS 105.

*Physophyllia* diagnosed p. 198, *ayleni* p. 332 fig., VAUGHAN & WELLS 105.

†*Physoseris* diagnosed p. 133, VAUGHAN & WELLS 105.

†*Phytogyra* diagnosed p. 222, *magifica* p. 340 fig., VAUGHAN & WELLS 105.

†Pinacophyllinae subfam. n. (of Astrocoeniidae) p. 101, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Pinacophyllum* diagnosed, *gracilis* p. 102 fig., VAUGHAN & WELLS 105.

†*Pironastrea* [sic] diagnosed p. 127, *anguillensis* p. 305 fig., VAUGHAN & WELLS 105.

†*Placocoenia* diagnosed p. 174, VAUGHAN & WELLS 105.

†*Placogyra* diagnosed p. 222, *felixi* p. 340 fig., VAUGHAN & WELLS 105.

†*Placophora* diagnosed p. 175, VAUGHAN & WELLS 105.

†*Placophyllia* diagnosed p. 233, *rugosa* p. 316 fig., VAUGHAN & WELLS 105.

†*Placosmia* *bilobata* p. 364 fig., *fimbriata* p. 365, *multisinuosa* p. 367 fig., *strangulata* p. 369, SABARIS 84.—*P.* diagnosed p. 186, *cuneiformis* pp. 324, 327 fig., VAUGHAN & WELLS 105.

*Placotrochus* diagnosed p. 227, VAUGHAN & WELLS 105.

†*Platycoenia* diagnosed p. 104, VAUGHAN & WELLS 105.

†*Platygyathus grahami* sp. n. p. 200 fig. Paleocene California, DURHAM J. Paleont. Menasha Wis. 17 2 1943.—*P.* (subgen. of *Trochocyathus*) diagnosed p. 205, *scottianus* p. 333 fig., VAUGHAN & WELLS 105.

*Platygyra* diagnosed p. 169, *lamellina* pp. 167, 319 fig., VAUGHAN & WELLS 105.

†*Platytrachus diabloensis* sp. n. p. 199 fig. Eocene California, DURHAM J. Paleont. Menasha Wis. 17 2 1943.—*P.* diagnosed p. 212, *stokesi* pp. 335, 337 fig., *claibornensis* p. 337 fig., VAUGHAN & WELLS 105.—*P. merriami* p. 294 fig., BENTSON 14.

†*Pleidiadia* a nomen nudum, possibly *Astrangia* or *Septastrea* [sic] p. 358, VAUGHAN & WELLS 105.

*Plerogyra* diagnosed p. 219, *sinuosa* p. 339 fig., VAUGHAN & WELLS 105.

†*Plerophyllum* sp. p. 62 fig., HILL 44.

*Plesiastrea* [sic] diagnosed p. 166, *versipora* p. 318 fig., VAUGHAN & WELLS 105.

†*Plesiophyllia* possibly *Favites* p. 243, VAUGHAN & WELLS 105.

*Plesioseris* (subgen. of *Psammocora*) diagnosed p. 130, *haimeana* p. 306 fig., VAUGHAN & WELLS 105.

†*Plesiosmia* diagnosed p. 233, VAUGHAN & WELLS 105.

†*Pleurocora* diagnosed p. 173, *angelisi* p. 321 fig., VAUGHAN & WELLS 105.

†*Pleuropodia* probably an astrangiid p. 244, VAUGHAN & WELLS 105.

*Pocillopora* diagnosed p. 105, development of first mesenteries p. 23 fig., *damicornis bulbosa* p. 299 fig., *elegans* p. 299 fig., *eydouxii* p. 299 fig., VAUGHAN & WELLS 105.

*Podabacia* diagnosed p. 142, *crustacea* p. 311 fig., VAUGHAN & WELLS 105.

†*Podoseris* diagnosed p. 179, VAUGHAN & WELLS 105.

*Polyastrea* (subgen. of *Pavona*) diagnosed p. 124, *obtusata* p. 303 fig., VAUGHAN & WELLS 105.

*Polycyathus* diagnosed p. 206, VAUGHAN & WELLS 105.

†*Polymorphastraea* diagnosed p. 231, VAUGHAN & WELLS 105.

*Polyphyllia* diagnosed p. 142, *talpina* pp. 143, 311 fig., VAUGHAN & WELLS 105.

†*Polyphylloseris* diagnosed p. 149, *simondsi* p. 313 fig., *convexa* p. 313 fig., VAUGHAN & WELLS 105.

*Porites* diagnosed p. 152, *porites* p. 315 fig., *P. (Synaraea) hawaiiensis* p. 315 fig., VAUGHAN & WELLS 105.

Poritoidae superfam. n. p. 146, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Prismatophyllum* C p. 581 fig., *percarinatum* var. 2 p. 581 fig., *P. D* p. 581, FAUL 35.—? *P.* sp. p. 55 fig., SMITH & YÜ 94.

†*Procyathophora* diagnosed p. 109, *fürstenbergensis* p. 301 fig., VAUGHAN & WELLS 105.

†*Procycolites* diagnosed p. 116, *tridicus* p. 302 fig., VAUGHAN & WELLS 105.

Procycolitidae fam. n. p. 114, VAUGHAN & WELLS Geol. Soc. Amer. Spec. Pap. 44 1943.

†*Progyrosomia* diagnosed p. 220, VAUGHAN & WELLS 105.

†*Protohcterastrea* [sic] diagnosed p. 156, *fritschii* p. 155 fig., VAUGHAN & WELLS 105.

†*Protoseris* diagnosed p. 118, VAUGHAN & WELLS 105.

†*Psammiphora* possibly a stylinid p. 244, VAUGHAN & WELLS 105.

*Psammocora* diagnosed p. 129, *nierstraszi* p. 306 fig., *folium* p. 306 fig., *P. (Plesioseris) haimeana* p. 306 fig., VAUGHAN & WELLS 105.

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## INCERTAE SEDIS

NONE



# 5. ECHINODERMA

ARRANGED BY

A. G. BRIGHTON, M.A.

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†*Catopygus* ? **sp.**, CURRIE 23 p. 27 fig. 11.

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†*Conulus grauensensis* **sp. n.** with vars. A and B Cretaceous Ethiopia, CURRIE Bull. Amer. Mus. nat. Hist. 82 pp. 23-25 figs. 4-7, pl. iii figs. 1-6.

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†*Echinarachnius blancoensis* **var. etheringtoni** **var. n.** Miocene U.S.A., WEAVER Univ. Washington Pub. Geol. 5 1942 p. 6 pl. iii figs. 7-8; *E. blancoensis* p. 5 pl. iii fig. 1-4, *newcombei* p. 6 pl. iii figs. 5-6, Id.

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†*Pericosmas gregoryi*, CURRIE 23 p. 26 fig. 10, pl. iv fig. 5.

*Phyllacanthus irregularis kimberi* **subsp. n.** S. Australia, COTTON & GODFREY Rec. S. Aust. Mus. Adelaide 7 1942 pp. 216-217 pl. xii figs. 1-2.

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†*Phragmactis* gen. n. pp. 506, 513, 529 for type *P. grayae* sp. n. Ordovician Scotland, SPENCER Mon. Palaeozoic Asterozoa Palaeontogr. Soc. London 1940 1940 p. 534 figs. 331A, 343-345, pl. xxxvii figs. 1-5.

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†*Actinocrinites elephantinus* p. 231 pl. viii figs. 1 & ? 3, *aculeatus* or *longispinosus* p. 233 pl. viii fig. 2, WRIGHT 72.

†*Actinocrinus eximius* nom. n. for *A. griffithi* Wachsmuth & Springer 1897, non *Steganocrinus griffithi* Miller & Gurley 1897, Carboniferous U.S.A., KIRK J. Wash. Acad. Sci. 33 p. 264.—*A. sp.*, DELPEY 25 p. 215 fig. 3.—*A. chloris*, KIRK 42 p. 346.

†*Amphoracrinus rochi* sp. n. Carboniferous N. Africa, DELPEY Bull. Soc. Sci. nat. Maroc Rabat 19 1941 p. 217 figs. 4-8.—*A. compressus* p. 88 pl. v fig. 11, *turgidus* pp. 88-89 pl. vi figs.

1-3, 5-7, *spp. n.* Carboniferous England, WRIGHT Geol. Mag. **80**; atlas p. 87 pl. iv figs. 6-7, *gilbertsoni* (forms I-III) p. 86 pl. iv figs. 1-5, 8-14, pl. v figs. 1-10, 12-13, pl. vi figs. 4, 8-15, *olla* p. 84, *Id.*—*A. brevicalix*, WRIGHT **72** p. 234.

†*Cactocrinus* *sp.*, WRIGHT **72** p. 233 pl. viii fig. 4.

†*Callicrinus primibrachialis* *sp. n.* Silurian U.S.A., BUSCH J. Paleont. Menasha, Wis. **17** pp. 107-109 fig. 1, pl. xx figs. 6-10.

†*Cyrtocrinus* *gen. n.* for type *Actinocrinus sculptus* Hall 1858 Carboniferous N. America, KIRK J. Wash. Acad. Sci. **33** pp. 263-264 figs. 3, 5.

†*Discocrinus* *gen. n.* for type *D. catastomus* *sp. n.* Cretaceous U.S.A., PECK J. Paleont. Menasha, Wis. **17** p. 474 fig. 12, pl. lxxii figs. 9-11.

†*Drepanocrinus peracutus* *sp. n.* Cretaceous U.S.A., PECK J. Paleont. Menasha, Wis. **17** pp. 463-464 fig. 13, pl. lxxvi figs. 9-22, 26, 28.

†*Eucalyptocrinus praerosaceus* *sp. n.* Devonian U.S.S.R., YAKOVLEV C.R. Acad. Sci. Moscou N.S. **27** 1940 p. 193 2 figs. [not seen.]—*E. or Lyriocrinus* group, DOLL **26** p. 60 pl. i fig. 2.

†*Lyriocrinus*, see *Eucalyptocrinus*.

*Metacrinus interruptus*, *rotundus*, GISLÉN **31** p. 3.

†*Orthogonocrinus* *gen. n.* for type *O. apertus* *sp. n.* Cretaceous U.S.A., PECK J. Paleont. Menasha, Wis. **17** pp. 464-465 fig. 14, pl. lxxvi figs. 2-8.

†*Pentacrinus* *sp.*, RUIZ DE GAONA **62** p. 93 pl. i fig. 60.

†*Pimlicocrinus* *gen. n.* for type *Amphoracrinus clitheroensis* Wright 1942 Carboniferous England, WRIGHT Geol. Mag. **80** pp. 89-91 pl. iii figs. 12-13, 18-20; *P. latus* *sp. n.* Carboniferous England, *Id.* pp. 91-92 pl. iii figs. 1-11, 14-17, 21-22.

†*Platycrinus* *sp.*, DELPEY **25** p. 214 figs. 1-2.

†*Plotocrinus* *gen. n.* for type *P. hemisphericus* *sp. n.* Cretaceous U.S.A., PECK J. Paleont. Menasha, Wis. **17** pp. 469-470 fig. 5, pl. lxxi figs. 4-5, 7-15, 24; *distinctus* *sp. n.* p. 471 fig. 2, pl. lxxii figs. 1, 7, 13, *inornatus* *sp. n.* p. 470 fig. 4, pl. lxxi figs. 6, 19-22,

*modulatus* *sp. n.* p. 470 fig. 6, pl. lxxi figs. 16-18, 23, *primitivus* *sp. n.* pp. 470-471 fig. 1, pl. lxxi figs. 1-3, Cretaceous U.S.A., *Id.*

†*Poecilocrinus* *gen. n.* for type *P. dispandus* *sp. n.* Cretaceous U.S.A., PECK J. Paleont. Menasha, Wis. **17** p. 471 fig. 8, pl. lxxv figs. 1, 2, 6, 8, 12; *P. dispandus elongatus* *var. n.* p. 471 fig. 10, pl. lxxv fig. 7, *dispandus explicatus* *var. n.* p. 472 fig. 9, pl. lxxv figs. 11, 14, *dispandus molestus* *var. n.* p. 472 pl. lxxv fig. 4, *pendulus* *sp. n.* p. 474 fig. 7, pl. lxxv figs. 3, 5, 9, 10, 13, *porcatus* *sp. n.* p. 474 fig. 3, pl. lxxii figs. 2-6, *spiculatus* *sp. n.* p. 472 fig. 11, pl. lxxiii figs. 6, 8, 13, Cretaceous U.S.A., *Id.*

†*Rhodocrinus skourensis* *sp. n.* Carboniferous N. Africa, DELPEY Bull. Soc. Sci. nat. Maroc Rabat **19** 1941 pp. 217-218 figs. 9-12.

†*Roveacrinus euglypheus* p. 469 fig. 18, pl. lxxii figs. 18-23; *lateolatus* p. 468 fig. 16, pl. lxxiii figs. 9-12, 14, pl. lxxvi fig. 1; *multisinuatus* pp. 466-467 fig. 21, pl. lxxii figs. 8, 14-17; *pentagonus* p. 467 fig. 19, pl. lxxii fig. 12, pl. lxxiii figs. 1-5, 7; *pyramidalis* pp. 468-469 fig. 15, pl. lxxii figs. 24-29; *signatus* p. 466 fig. 17, pl. lxxiv figs. 1-5, 11-14; *spinalatus* pp. 467-468 fig. 20, pl. lxxiv figs. 8, 10; *spinosus* p. 467 fig. 22, pl. lxxiv figs. 6-7, 9, pl. lxxvi figs. 37, 39?; *spp. n.* Cretaceous U.S.A., PECK J. Paleont. Menasha, Wis. **17**.

†*Steganoocrinus elongatus* *sp. n.* Carboniferous U.S.A., KIRK J. Wash. Acad. Sci. **33** pp. 261-263; *S. araneolus* p. 260 fig. 4, *concinus* p. 260, *S. ? globosus* p. 261, *S. pentagonus* p. 261 figs. 1-2, *validus* p. 261, *Id.*

†*Triceroocrinus* *gen. n.* for type *T. moorei* *sp. n.* Permian Texas, BRAMLETTE J. Paleont. Menasha, Wis. **17** pp. 550-553 pl. xlv figs. 1-7; *T. sp.*, *Id.* p. 552 pl. xlv figs. 8-15.

†*Trichinoocrinus* *gen. n.* for type *T. terranovicus* *sp. n.* Ordovician Newfoundland, MOORE & LAUDON Amer. J. Sci. New Haven **241** pp. 262-268 fig. 1 pls. i-ii.

†*Zygotoocrinus* *gen. n.* for type *Z. fragilis* *sp. n.* Carboniferous U.S.A., KIRK Amer. J. Sci. Newhaven **241** pp. 640-646 pl. i.



†Crinoid brachials, PECK 58 p. 452, pl. lxxvi figs. 23-25, 27, 29-36, 38, 40-46.—Calyces, DOLL 26 p. 61 pl. i figs. 3a, e.—Columnals, DELPEY 25 p. 219 fig. 13.

The following names are proposed, as were those of Moore (Zool. Record for 1939 V 114) for collective groups of specifically unidentifiable crinoid plates, and have no systematic status:—

†Columnal *intermedia* p. 222 pl. i figs. 3-4, *maxima* p. 223 pl. i figs. 5-6, *minima* p. 22 pl. i figs. 1-2, new "forms" Permian U.S.A., BYRNE & SEEBERGER Trans. Kans. Acad. Sci. 45.

†Facetal *circularia* p. 223 pl. i fig. 11, *triangulata* p. 224 pl. i figs. 7-9, *tuberculata* pl. i fig. 10, new "forms" Permian U.S.A., BYRNE & SEEBERGER Trans. Kans. Acad. Sci. 45.

†Polygonal *hexagona* p. 225 pl. i figs. 16-17, *pentagona* p. 224 pl. i figs. 12-13, new "forms" Permian U.S.A., BYRNE & SEEBERGER Trans. Kans. Acad. Sci. 45.

#### MACHAERIDIA.

[Vacant.]

#### †CYSTIDEA & EDRIOASTEROIDEA.

*Amygdalocystites tribrachiatus* sp. n. Ordovician U.S.A., BASSLER Amer. J. Sci. New Haven 241 pp. 695-696 pl. i figs. 14-15.

*Callocystites* group, DOLL 26 p. 61 pl. i fig. 3d.

*Caryocrinus* group, DOLL 26 p. 61 pl. i figs. 3b-c.

*Caryocystites tappani* sp. n. Ordovician U.S.A., BASSLER Amer. J. Sci. New Haven 241 p. 690 pl. i figs. 16-18.

*Cheirocrinus ardmorensis* pp. 699-700 pl. i fig. 6, *C.?* *loeblichi* pp. 701-702 pl. i figs. 1-2, spp. n. Ordovician U.S.A., BASSLER Amer. J. Sci. New Haven 241.

*Echinoencrinites?* *ornatus* sp. n. Ordovician U.S.A., BASSLER Amer. J. Sci. New Haven 241 p. 703 pl. i fig. 7.

*Enoploura?* *papillata* sp. n. Ordovician U.S.A., BASSLER Amer. J. Sci. New Haven 241 p. 695 pl. i figs. 3-5.

*Glyptocystites loeblichae* sp. n. Ordovician U.S.A., BASSLER Amer. J. Sci. New Haven 241 pp. 702-703 pl. i figs. 8-9.

*Holocystites greenvillensis*, BUSCH 14 p. 106 pl. xx figs. 1-5.

*Platycystites bromidensis* p. 698 pl. i fig. 10, *cristatus* pp. 697-698 pl. i fig. 11, *fimbriatus* p. 698 pl. i fig. 12, *levatus* p. 697 pl. i fig. 13, spp. n. Ordovician U.S.A., BASSLER Amer. J. Sci. New Haven 241.

#### †BLASTOIDEA.

*Paracodaster* gen. n. for type *P. miloradovitchi* sp. n. Permian U.S.S.R., YAKOVLEV C.R. Acad. Sci. Moscou N.S. 27 1940 pp. 887-888 fig. [not seen.]

*Pentremites laminatus* sp. n. Carboniferous U.S.A., EASTON J. Paleont. Menasha, Wis. 17 pp. 136-137 pl. xxi figs. 9-10.

# 6. VERMES

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W. NICOLL.

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# 7. BRACHIOPODA

BY

J. K. S. ST.-JOSEPH, M.A., Ph.D.

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2.—**Opinion 138.** On the method by which the Amendment to Article 25 of the International Code adopted at the Budapest Meeting of the International Zoological Congress, relating to the replacement of invalid names, should be interpreted. Opinions rendered Internat. Comm. Zool. Nomencl. 2 138 1942 pp. 29–34.

3.—**Opinion 141.** On the principles to be observed in interpreting Article 4 of the International Code relating to the naming of families and subfamilies. Opinions rendered Internat. Comm. Zool. Nomencl. 2 141 1943 pp. 55–66.

4.—**Opinion 145.** On the status of names first published in works rejected for nomenclatorial purposes and subsequently published in other works. Opinions rendered Internat. Comm. Zool. Nomencl. 2 12 1943 pp. 99–108.

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†*Pionorthis occidentalis* sp. n. Ordovician Canada (Manitoba), OKULITCH Trans. roy. Soc. Can. (3) 37 4 1943 pp. pp. 71–72 pl. i figs. 8–10.

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†*Devonoproductus* gen. n. for type *Productus dissimilis* Hall 1858, STAINBROOK J. Paleont. Menasha, Wis. 17 1943 p. 55-56.

†*Dictyoclostus liddlei* sp. n. p. 332 pl. xxxii fig. 10 Devonian Venezuela, ? sp. p. 332 pl. xxxii fig. 10a, HARRIS in LIDDLE, HARRIS & WELLS Bull. Amer. Paleont. Ithaca 27 1943.—*D. hindi* p. 120 fig. 1, *pinguis* var. *munda* var. nov. pls. i-ii Lower Carboniferous Russia (Moscow basin), SARYTCHEVA Bull. Soc. Nat. Moscou Sect. Geol. N.S. 18 3-4 1940.—*Productus* (*D.* ?) *porteri* sp. n. Upper Devonian England, REED Geol. Mag. London 80 1943 pp. 95-96.—*D.* p. 325, sp. pl. liv figs. 2-8, SUTTON & SUMMERSON 41.

†*Echinoconchus* ? sp. EASTON 17 p. 147.—*E.* pp. 327-328, *semipunctatus* pl. liv figs. 12-15, with var. *knighti* (?) pl. liv figs. 10-11, SUTTON & SUMMERSON 41.

†*Hamlingella* subgen. n. see *Productella*.

†*Irboskites* p. 153, *suchlovae* sp. n. p. 155 pl. ii figs. 7-8 Devonian Russia, *fixatus* p. 154 pl. ii figs. 3-6, NALIVKIN Brachiopods of the main Devonian field 1941.

†*Juresania* p. 328, sp. pl. liii figs. 22-30, SUTTON & SUMMERSON 41.

†*Krotovia lucerna* sp. n. Carboniferous U.S.A. (Arkansas), EASTON J. Paleont. Menasha, Wis. 17 1943 p. 147 pl. xxiv figs. 6-8.

†*Leptalosia* p. 5, *gracilis* sp. n. pp. 5-6 pl. i fig. 39, pl. iii figs. 1-2 Carboniferous Russia, IVANOV & IVANOVA Trans. All Union Sci. Res. Inst. Econ. Mineralogy 108 1936.—*L.*, SUTTON & SUMMERSON 41 p. 324.

†*Linoproductus pileiformis*, EASTON 17 p. 148.—*L.* p. 327, sp. pl. liii figs. 16-21, SUTTON & SUMMERSON 41.—*L. prattenianus*, WILLMAN & PAYNE 50 pl. xxx.

†*Marginifera* pp. 326-327, *haydenensis* pl. liii figs. 9-12, *splendens* pl. liii figs. 6-7, 13-15, SUTTON & SUMMERSON 41.

†*Marginirugus* pp. 325-326, *magnus* pl. liv fig. 1, SUTTON & SUMMERSON 41.

†*Mesoplica* subgen. n. see *Productus*.

†*Productinella* subgen. n. see *Productus*.

†*Productus amazonicus* pl. viii figs. 4-6, *batesianus* pl. viii fig. 3, *chandlessi* pl. viii figs. 7-8, *cora* pl. vii figs. 1-3, *lineatus* pl. x fig. 21, *wollacianus* pl. viii fig. 2, DE OLIVEIRA & LEONARDOS 14.—*P. cestriensis*, EASTON 17 p. 147.—*P.* p. 325, *cestriensis* pl. liv fig. 9, SUTTON & SUMMERSON 41.

†*Productus* (*Gigantella*) *giganteus*, WHITTARD & SMITH 48 p. 446.

†*Productus* with *Mesoplica* subgen. n. p. 97 for type *Leptaena praelonga* J. de C. Sowerby, p. 98 Devonian England, REED Geol. Mag. London 80 1943.

†*Productus* (*Productina* ?) *simplicior*, REED 32 p. 99.

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(Iowa), *aspera* p. 432 figs. 1-3 pl. lxviii figs. 17-27, *occidentalis* p. 437 pl. lxxix figs. 1-5, STAINBROOK J. Paleont. Menasha, Wis. 17 1943.

†*Gürichella* p. 38, ? *tapykovoensis* pp. 43-44 pl. v fig. 4, *upaensis* pp. 39-43 figs. 12-16 pl. v figs. 1-3, pl. xi figs. 1-2 spp. n. Devonian Russia (Moscow basin), SOKOLSKAIA Trav. Inst. paléozool. Acad. Sci. U.R.S.S. 12 2 1941.—*Spirifer* (G.) *obliteratus* var. *brushfordensis* var. n. p. 103 Upper Devonian England, *bouchardi* var. *belliloci* p. 102, REED Geol. Mag. London 80 1943.

†*Hysterolites* cf. *hystericus*, ALLAN 7 p. 147.

†*Ilmenia* gen. n. p. 186 for type *Ilmenia altovae* sp. n. p. 187 pl. vii figs. 1-2 Devonian Russia, NALIVKIN Brachiopods of the main Devonian field 1941.

†*Lamellispirifer* p. 183, *muralis* p. 183 pl. vii figs. 9-10, NALIVKIN 26.

†*Martinia* with *Eomartiniopsis* subgen. n. p. 78 for type *E. elongata* sp. n. pp. 82-85 figs. 29-31 pl. vii figs. 2-4, pl. xii figs. 1-2, *helenae* pp. 80-82 fig. 32a pl. vii fig. 1, *ovalis* pp. 85-86 pl. vii figs. 5-6, *tscherepeti* pp. 86-88 figs. 33-35 pl. vii figs. 7-9, pl. xii figs. 3-4 spp. n. Devonian-Carboniferous Russia, (Moscow basin), SOKOLSKAIA Trav. Inst. paléozool. Acad. Sci. U.R.S.S. 12 2 1941.—*M.* pp. 64-69, aff. *glabra* p. 75 fig. 28 pl. vi figs. 1-2, *media* var. *donaica* p. 74 pl. vi figs. 8-9, *ranovensis* p. 69 fig. 27 pl. vi figs. 3-7, SOKOLSKAIA 38.

†*Neospirifer triplicatus*, WILLMAN & PAYNE 50 pl. xxx.

†*Palaeochoristes* gen. n. for type *Spirifer cinctus* Keyserling 1846 Carboniferous Russia p. 26 fig. 6b, *cinctus* p. 29 figs. 7-11, pl. iii figs. 1-5, pl. x 1-3, SOKOLSKAIA Trav. Inst. paléozool. Acad. Sci. U.R.S.S. 12 2 1941.

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†*Spirifer weisbordi* sp. n. pp. 284. 335-336 pl. xxxii figs. 19-20, pl. xxxiii fig. 1 Devonian Venezuela, *kingi* p. 336 pl. xxxiii figs. 2-4, *olsooni* p. 336 pl. xxxiii fig. 5, HARRIS in LIDDLE, HARRIS & WELLS Bull. Amer. Paleont. Ithaca 27 1943.—*S.* p. 8 fig. 2a, *pentagonus* p. 23 pl. ii figs. 4-6, with var. *curtocluda* var. n. pp. 25-26 pl. ii figs. 7a-d Carboniferous Russia (Moscow basin), *cinctus* pl. ix fig. 6, *taidonensis* p. 19 pl. ii figs. 1-2, *tornacensis* p. 12 figs. 1b. 3-5 pl. i figs. 1-14, pl. ix figs. 1-4, *ventricosus* p. 21 pl. ii fig. 3, SOKOLSKAIA Trav. Inst. paléozool. Acad. Sci. U.R.S.S. 12 2 1941.—*S.* *raymondi*, BALDWIN 8 p. 14 pl. i fig. 23.—*S.* *antarcticus* pl. v figs 4-5, *cameratus* pl. vii fig. 16, pl. x fig. 1, *clarkei* pl. vi fig. 2, *condor* pl. vii figs. 4-6, *contrarius* pl. iv fig. 16, *derbyi* pl. vi fig. 3, *iheringi* pl. iv figs. 10-13, *katzeri* pl. iv figs. 17-18, *kayserianus* pl. iv figs. 6-9, *laurosodreanus* pl. iv figs. 14-15, *parand* pl. iv fig. 19, *piracanensis* pl. x figs. 3-4, *rockymontanus* pl. x fig. 2, DE OLIVEIRA & LEONARDOS 14.—*S.* *murchisoni* ?, DOLL 15 p. 676 pl. i.

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†*Meristella wheeleri* p. 338 pl. xxxiii fig. 8, sp. p. 338 pl. xxxiii figs. 9-9a, HARRIS in LIDDLE, HARRIS & WELLS 20.

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†*Athyris vitatta*, BALDWIN 8 p. 14 pl. i figs. 8-9.—*A. spiriferoides*, HARRIS in LIDDLE, HARRIS & WELLS 20 p. 338 pl. xxxiii fig. 10.—*A. concentrica*, cf. *lens*, REED 32 p. 132.

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†*Amphigenia elongata* var. *weisbordii* var. n. pp. 284, 333-334 pl. xxxii figs. 12-16 Devonian Venezuela, HARRIS in LIDDLE, HARRIS & WELLS Bull. Amer. Paleont. Ithaca 27 1943.

†*Centronella jamesiana*, DE OLIVEIRA & LEONARDOS 14 pl. vi fig. 7.

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†*Diestothyris* aff. *D. frontalis*, MACNEIL 22 p. 94 pl. xvi figs. 8, 11, 13-14.

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# 8. BRYOZOA (POLYZOA).

BY

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## I.—TITLES.

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## II.—SUBJECT INDEX.

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# 9. MOLLUSCA.

BY

A. E. SALISBURY, A.M.I.E.E.

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**East Pacific.**—Panama, new *Tellina* and *Oxynoe*, figs., H. A. PILSBRY & A. OLSSON, 282; Ecuador, a new *Tellina*, figs., H. A. PILSBRY & A. OLSSON, 282; Peru, a new *Anomalocardia*, figs., H. A. PILSBRY & A. OLSSON, 282.

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Australian Shells, J. ALLAN, 4; Octopodea of New Zealand, W. B. BENHAM, 47; *Macroctopus maorum*, in New Zealand Waters, life history and anatomy, figs., W. B. BENHAM, 48; Australian marine mollusca, sterol fraction, P. FANTI, 116.

A new *Charitodoron* from 430-630 fms., Cape Point, S.A., J. R. LE B. TOMLIN, 359.

## III.—SYSTEMATIC INDEX.

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NOTE.—The arrangement here used follows, in general, that of Thiele's *Handbuch*. The most important differences are that Epitonacea and Pyramidellacea are placed immediately preceding Muricea in order of grouping, and the families Triviidae and Eratoidae are placed in Lamellariacea.

## POLYPLACOPHORA.

## CHITONACEA.

†*Ischnochiton vectensis* sp. nov. holotype and paratypes from Lattorrian Middle Headon deposits, Colwell Bay, Isle of Wight, A. WRIGLEY Proc. Malac Soc. London 25 5/6 p. 188 figs. 1, 2, 3.

†*Stenoplax selseiensis* p. 189, fig. 4; *S. anglica* p. 189, fig. 5, spp. nov., Auversian, Bracklesham Beds, Medmery Farm, Selsey, A. WRIGLEY Proc. Malac. Soc. London 25 5/6 1943.

## Gastropoda.

## STREPTONEURA.

## ASPIDOBANCHIATA.

## RHIPIDOGLOSSA.

## HALIOTIDACEA.

*Balboaina* subgen. nov. of *Fissurella*, type *Fissurella picta* Gmelin, I. P. FARFANTE Johnsonia Harvard 10 1943 p. 2.

†*Bellerophon micromphalus* Morris, TEICHERT & FLETCHER 350.

*Diodora aguayoi* sp. nov. off Sandy Bay, Barbados, in 100 fms., I. P. FARFANTE Johnsonia Mass 11 1943 p. 11 pl. iv f. 1-3.—*Diadora jamei* Aguy. & Rhdr., J. S. SCHWENGEL 320.

†*Diadora chipolana caroliniana* var. nov., Gillette, marl pits, Silverdale,

North Carolina, Lower Miocene, H. G. RICHARDS J. Paleont. Menasha Wis. 17 5 1943 p. 522 pl. lxxxv f. 17.

†*Euphemites incarinatus* sp. nov. Pitkin formation, Arkansas, W. H. EASTON J. Paleont. Menasha Wis. 17 2 1943 p. 150 pl. xxiv f. 22.

*Fissurella (Cremides) clenchi* sp. nov. Nova Almeida, Espirito Santo, Brasil, Thayer Expedition, 1865-1866, I. P. FARFANTE Johnsonia Harvard 10 1943 p. 11 pl. iii f. 8-11.—*F. nodosa* *crusoe* subsp. nov. Magueripe Bay, Trinidad, I. P. FARFANTE Johnsonia Harvard 10 1943 p. 5 pl. i f. 9.

*Haliotis asinina* fig. in colour, P. A. ROBERT 304.

†*Lophospira breviangulata* p. 365 f. 9; *L. expansa* p. 366 f. 3; *L. liosutura* p. 366 f. 12; *L. trilineata* p. 366 f. 10: Ordovician spp. nov. Passage Creek, Martinsburg formation, Massanutten Mountain, Virginia, M. H. SECRIST & W. R. EVITT J. Wash. Acad. Sci. 33 12 1943.

†*Mourlonia angulata* sp. nov. Pitkin formation, Arkansas, W. H. EASTON J. Paleont. Menasha Wis. 17 2 1943 p. 150 pl. xxiv f. 17-19.

*Rimula longa* 13 fms. off Destin, north-west Florida, p. 38, pl. 7, f. 2; *R. pycnonema* in about 250-300 feet of Palm Beach, p. 39, pl. vii, f. 3; spp. nov. H. A. PILSBRY Nautilus Philad. 57 2 1943.

†*Tugali kumeroa* sp. nov. Tahoraite, near Kameroa, New Zealand (high in the Lower Niekumaruan), C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 195 pl. xxviii f. 6, 6a.

## DOCOGLOSSA.

## PATELLACEA.

*Acmea vincentiana* sp. nov. = *Truncatella marginata* Cox 1868, more Aust. landshells 92, Glency, S. Australia, B. C. COTTON Trans. roy. Soc. S. Aust. 66 2 1943 p. 126 pl. v, f. 11-13.

*Cellana rota*, *tramoserica*, *radians*, figs. in colour, P. A. ROBERT 304.

†*Helcionopsis* ? *reticulatus* sp. nov. Pitki formation [Carb.], Arkansas

W. H. EASTON J. Paleont. Menasha Wis. 17 2 1943 p. 150 pl. xxiv f. 23.

†*Leptodesma chillensis* sp. nov. Three forks formation [Devonian], Porah Peak, Snake R. Plains, Montana, E. M. BALDWIN Bull. Amer. Paleont., Ithaca 23 110 1932 p. 15 pl. i f. 1-2.

*Nacella clypeater* fig. in colour, P. A. ROBERT 304.

*Patella caerulea, longicosta, granularis* figs. in colour, P. A. ROBERT 304.

### TROCHACEA.

*Arene riisei* St. John, Virgin Islands, p. 192 pl. xix f. 17-18; *A. vanhyningi* Sand Key, 8 miles south of Key West p. 192 pl. xix f. 15-16 spp. nov., H. A. REHDER Proc. U.S. Nat. mus. Washington 93 3161 1943.

*Coelotrochus browni* sp. nov. Takapau coast, between Ototoka and Okehu Creeks, New Zealand (300 feet above base of Petane Series, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 195 pl. xxviii f. 5.

*Gaza* in the Western Atlantic, W. J. CLENCH & R. T. ABBOTT 83.

*Halopsephus* gen. nov. Turbinidae type *H. pulcher* sp. nov. dredged off Lazaretto, Barbados, in shallow water off rocky bottom, H. A. REHDER Proc. U.S. Nat. mus. Washington 93 3161 1943 p. 191 pl. xx f. 3, 10.

†*Levella* gen. nov. Trochidae type *L. tersa* sp. nov. Lower Miocene Siltstone, Allday Bay spp. nov., J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p.

*Livona* in the Western Atlantic, W. J. CLENCH & R. T. ABBOTT 83.

*Margarites (Pupillaria) matusima* sp. nov., S. NOMURA Rec. Bull. Saito Ho-on Kai Mus. Sendai 19 1940 (pp. 1-12).

†*Maurea correlata* sp. nov. Mangatopo, below Pueroa Trig, New Zealand (Opoitian), C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 196 pl. xxviii f. 7.

†*Solariella (Machaeroplax) varicosa nomeana* subsp. nov. Pliocene, near Nome, Alaska, F. S. MACNEIL J.

Paleont. Menasha-Wis. 17 1 1943 p. 85 pl. xi f. 16, 17.

†*Teinostoma (Teinostoma ?) lens* sp. nov. Miocene, Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 51 pl. iv f. 7, 9.

†*Tipua* gen. nov. Liotiidae, type *Submargarita tricineta* Marshall, Bortonian (Mid Eocene), J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 187, pl. xxvi f. 24, 25.

### NERITACEA.

*Neritina virginea*, E. A. ANDREWS 7.

*Striatemoda* subgen. nov. of *Alcadia* (?) type *A. (Emoda ?) striata* (Lk.) from Puerto Rico, H. B. BAKER Naut. 54 2 1940 p. 71.

*Theodoxus pallasi* Lindh. var. *nalivkini* n. var. [nom. nud.]; *T. (Ninnia) schultzi* (Grimm.) var. *jukovi* n. var. [nom. nud.], V. P. KOLESIKOV 196.

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*Aperostoma*, notes on the name, P. BARTSCH 36.

*Bartschivindex* subgen. nov. of *Poteria*, type *P. varians* (C.B. Ad.), H. B. BAKER Nautilus Philad. 56 4 1943 p. 135.

*Campeloma decisum* (Say) experiment in parasitism, L. N. ALLISON 5.—*Campeloma* sex ratios, L. HUBRICHT 164.

*Megalomastoma croceum* (Gmel.), H. B. BAKER 23.—*M. croceum*, P. BARTSCH 35.

*Notopalena* subgen. nov. of *Notopala* type *essingtonensis* Frauenfeld, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 197.

*Poteria* notes on the name, P. BARTSCH 36.

*Pseudaperostoma* subgen. nov. of *Poteria*, type *Poteria inca* (Orb.), H. B. BAKER Nautilus Philad. 56 4 1943 p. 135.

*Ptychocochlis* notes on the name, P. BARTSCH 36.

Viviparidae revision of Chinese species, T.-C. YEN 391.



*Viviparus malleatus* a new record in Massachusetts, W. J. CLENCH 79.—  
†*Viviparus* sp. pl. i, f. 5, from the Lias ? Volcanic formation Lebombo Mozambique, J. V. L. RENNIE, Bol. Serv. Indust. Min. Geol. Moçambique 5 1943 p. 20.

### LITTORINACEA.

*Littorina littorea* (L.) observations on local movements, R. W. D. DEXTER 102.

*Littorina irrorata* (Say), T. M. WOODARD, Junr. 385.

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†*Alvania bartschi* sp. nov. zone of unconformity at base of the Pleistocene at Punta Piedra, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 78 (230) pl. xi f. 10.

Amnicolidae of Michigan, E. G. BERRY 52.

*Angrobia* gen. nov. Paludestrinidae type *Hydrobia angasi* Smith, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 204.

*Assimineia relata* sp. nov. = *A. affinis* Mousson 1874, Cat. Godeffroy Mus. 5 103 nom. nud., Burleigh Heads, Queensland, B. C. COTTON Trans. roy. Soc. S. Aust. 66 2 1943 p. 127 pl. iv f. 1, 2.

*Austropyrgus* gen. nov. Hydrobiidae type *Paludina nigra* Quoy et Gaimard 1935, from small freshwater creeks, D'Entrecasteaux Channel, Tasmania, B. C. COTTON Trans. roy. Soc. S. Aust. 66 2 1943 p. 125.

*Bedomeneia* gen. nov. Paludestrinidae type *Bedomeneia bellii* Petterd, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 202.

*Bythinella pattisoni* sp. nov. River Torrens, at Paradise Park, B. C. COTTON Trans. roy. Soc. S. Aust. 66 1 1942 p. 81 pl. i f. 5, 6, 7.

*Cingula matusimana* sp. nov. Matusima Bay, S. NOMURA Res. Bull. Saito Ho-on Kai Mus. Sendai 19 1940 (pp. 1-12).

*Coriella molesta* sp. nov. Port Phillip Victoria; *C. exposita* Cranbrook, inland

from Albany, W. Australia, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 211.

*Euamnicola* Crosse & Fischer on the genotype, H. A. PILSBRY 277.

*Gabbia iredalei* sp. nov. Storm Creek, Central Australia, B. C. COTTON Trans. roy. Soc. S. Aust. 66 2 1943 p. 126 pl. iv f. 3-5.—*G. centralia* sp. nov. (*Bithinia australis* "Hedley" Rep. Horn Sci. Exped. pt. ii Zool. p. 220 figs. A and B in text), Oodnadatta, Central Australia, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 206.

*Hydrobia grisumi* Cless. var. *gemmata* nom. nov. [nom. nud.]; *H. chrysopsis* n. sp. [nom. nud.] 196; *H. venirosa* Montg. var. *evanescens* "nom. nov." [nom. nud.], V. P. KOLESNIKOV 196.—*H. jenkinsi* Smith, a recent immigrant, N. F. McMILLAN 224.—*H. stagnalis* radula figd., K. Zebera 395.

*Microdochus* gen. nov. Rissoidae type; *M. floridanus* sp. nov. Bonefish Key, Florida Keys, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 193 pl. xx f. 6.

*Microdochus floridanus* Rehder Missouri Key, not at Bonefish Key, Pr. U.S. N. Mus. 83 p. 193, H. A. REHDER 295.

*Obesitena* gen. nov. Stenothyridae type *Stenothyra australis* Hedley; *O. a. wildiana* subsp. nov. Nudgee, near Brisbane, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 205.

†*Paludestrina steini* Quaternary France, F. BOURDIER 61.

*Pellamora* gen. nov. Iravadiidae type *Iravadia australis* Hedley; *P. procera* sp. nov. Port Darwin, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 206.

*Phycodrosus* subgen. nov. of *Rissoella*, type *Rissoella* (*Phycodrosus*) *caribaea* sp. nov. Bonefish Key, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 194 pl. xx f. 7.

*Phrantela* gen. nov. Paludestrinidae, type *Potamopyrgus* (?) *marginata* Petterd "recalls *Tatea* more than any other group," T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 202.

*Posticobia* gen. nov. Paludestrinidae type *Hydrobia brazieri* Smith, *P. chena* sp. nov. Chichester Dam, Hunter River district, Australia, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 204.

*Pupiphryx* **gen. nov.** of Paludestridinae, type *Bithynia dyeriana* Petterd, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 201.

*Pupiphryx cooma* **sp. nov.** Cooma southern N.S.W. "The first *Pupiphryx* from N.S.W.," T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 202.

Rissoidae Anatomy figs., J. JOHANS-SON 182.

*Rivissessor* **gen. nov.** of Paludestridinae, type *Hydrobia gunnii* Frauenfeld (Auct.), T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 200.

*Tatea kesteveni* Manly Lagoon, Manly, N.S.W.; *T. ballina*, Ballina, northern New South Wales **sp. nov.**, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 205.

*Truncatella* spp., H. WATSON 370.

*Turricaspia bakuana* "n. sp." [nom. nud.]; *T. nossovi* n. sp. [nom. nud.], V. P. KOLESNIKOV 196.

*Valvatasma* **gen. nov.** Paludestridinae, type *Valvata tasmanica* Ten. Woods, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 203.

### CERITHIACEA.

*Caecum* (*Caecum*) *cayosense* **sp. nov.** Bonefish Key, Florida Keys, H. A. REHDER Proc. U.S. Nat. Mus. Washington 1943 93 3161 p. 190 pl. xx f. 9.

*Cerithidea hegewischii* from the Pacific Coast of America, J. C. BEQUAERT 49.

"*Eularina*" **nov.** as a probable new name for *Larina*, p. 199, T. IREDALE 175.

*Fartulum nebulosum* **sp. nov.** Bonefish Key, Florida Keys, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 190 pl. xx f. 8.—*F. nebulosum* Rehder ex Missouri Key, 14–15 m. west of Bonefish Key, not as given Pr. U.S. Nat.-Mus. 83 190, H. A. REHDER 295.

*Goniobasis* of the Pacific slope of the United States, C. GOODRICH 143.

*Hemimitra tangi* **sp. nov.** Kiang-yang, northern Fukien Province, S-F. CHENG Nautilus Philad. 57 1 1943 p. 19 pl. vi f. 2.

*Hua* **gen. nov.** Melaniidae, type *Melania telonaria* Heude 1888 (list of

spp. included in the new genus), S-F. CHEN Nautilus 57 1 1943 p. 21 pl. vi f. 1.

*Melania grangeri* Wattlebled 1884, a subsp. of *Melanoides tuberculata*, J. BEQUAERT 50.

*Melanopss* **err. pro** *Melanopsis* p. 317, L. C. SEURAT 322.

*Melanopsis*, M. VIDAL Y LÓPEZ 365.

*Plotiopsis centralia* **sp. nov.** Innamincka, Coopers Creek, Central Australia, B. C. COTTON Trans. roy. Soc. S. Australia 67 1 1943 pp. 144, 146 pl. xv f. 3, 4.—*P. subornata* **sp. nov.** Burdekin River, North Queensland, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 208.

†*Potamides silverdalensis* **sp. nov.** Lower Miocene Gillette marl pits, Silverdale, North Caroline, H. G. RICHARDS J. Paleont. Menasha Wis. 17 5 1943 p. 523 pl. lxxxv f. 13.

*Pseudopotamis* Martens, type here designated *P. finschi* Martens, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 209.

*Ripalania* **gen. nov.** Thiaridae [type] *R. queenslandica* Smith, Saltwater Creek, Cardwell, North Queensland, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 209.

*Sermyla kowloonensis* "sp. nov." [nom. nov.] = *Melania sculpta* Gred. Mal. Bl. (n.s.) 9, 153, not M. s. Souleyet, Kowloon, S-F. CHEN Nautilus 57 1 1943 p. 20 pl. vi f. 3.

*Sermylasma* **gen. nov.** Thiaridae type *Melania venustula* Brot. *S. prognata* **nom. nov.** for *M. venustula* Smith non Brot. *S. retracta* **sp. nov.** Lennard River N.W. Australia, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 208.

*Solarium perspectivum* fig. in colour, P. A. ROBERT 304.

*Stenomelania denisoniensis* ultra Clarence River, N.S.W.; *S. d. tacita* Cardwell **subsp. nov.**, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 209.

*Sulcospira praemordica* Tryon *laevitaceae* **subsp. nov.** cave deposit Southern Shan States, Burma, J. BEQUAERT Trans. Amer. Phil. Soc. Philad. N.S. 32 3 1943 p. 435 pl. xxxiii f. 25–30.

†*Tachyrhynchus lacteolus nomensis* **subsp. nov.** Pliocene nr. Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha Wis. 17 1 1943 p. 83 pl. xi f. 10–11.

*Thiara amaruloidea* sp. nov. Cardwell, Queensland, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 207.

†*Tubena* subgen. nov. of *Gegania*, type *G. (T.) viola* sp. nov. Awamoan, Lower Miocene, N.Z., J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 188 pl. xxvi f. 14, pl. xxvii f. 30.

†*Turritella bakeri* sp. nov. Raritan Sayreville New Jersey, H. G. RICHARDS Proc. Acad. nat. Sci. Philad. 95 1943 p. 29 pl. vi f. 3.—†*T.* fossil species from the Santa Ynez Mountains, Santa Barbara, Co. California, figs., F. R. KELLEY 189.—†*T. mortoni postmortoni* HARRIS, figs., R. WASEN & L. J. WILBERT 368.

*Wanga* gen. nov. Melaniidae genotype *Melania henriettae* Gray. 1834 (with list of spp. included in the new genus), S.-F. CHEN Nautilus 57 1 1943 p. 20 pl. vi f. 4.

#### CALYPTRAEACEA.

*Crepidacella vestalis* sp. nov. 40 fms. off Ajax Reef, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 194 pl. xx f. 13.

†*Platyceras sinistrum* f. 3, 3A; *P. (?) gibraltar* f. 4-6 spp. nov. Devonian, Venezuela, G. D. HARRIS Bull. Amer. Paleont. Ithaca 27 108 1940 p. 77 (345) pl. ix.

#### STROMBACEA.

*Aporrhais occidentalis mainensis*, a more southern loc. "off Barnstable light," Mass., M. C. STEWART 346.

*Pterocera rugosa* fig. in colour, P. A. ROBERT 304.

*Strombus gigas horridus* var. nov. Lake Worko, Fla., MAXWELL SMITH World-wide Sea Shells p. 131 1942.—*S. bituberculatus, aurisdianae* figs. in colour, P. A. ROBERT 304.—*S. galeatus* Sco., A. SORESENSEN 338.

*Tugurium* in Western Atlantic, W. J. CLENCH & C. G. AGUAYO 84.

*Xenophora robusta* Verrill found at Playa Larga (Long Beach), Acapulco, Dec., 1930, figs., M. E. BOURGEOIS 62.—*X.* in the Western Atlantic, W. J. CLENCH & C. G. AGUAYO 84.

#### NATICACEA.

†*Amauropsis cadwaladeri* sp. nov. Raritan, Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. nat. Sci. Philad. 95 1943 p. 28 pl. v f. 19.

†*Natica scethra burica* subsp. nov. Pliocene Charco Azul Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 79 (231) pl. x f. 2, 7.—†*N. costata* Künst., A. F. BAYKAL 43.

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†*Proterato pliocenica* sp. nov. Takapaw, New Zealand, Waitotaran (calcareous sandy mudstone facies), C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 196 pl. xxix f. 10.

*Pustularia (Pustularia) tricornis valavula* subsp. nov. inside main reef, type loc. Nadrogu, Kadavu, Taveuni, Suva, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 311.—*P. (Annepona) margarita thuva* subsp. nov. inside main reef Fiji, Kadavu, Suva, Levuka, type loc. Nadroga; *P. (P.) cicercula jennisoni* subsp. nov. Levuka, Suva, Naselai, Bega, type loc. Taveuni, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 310.

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*Arabica eglantina momokiti* subsp. nov. Suva, fairly common throughout Fiji p. 327; *A. scurra vono* Suva subsp. nov., also from Kadavu, Levuka and Nadroga p. 328, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943.

*Basilitrone isabella cavia* subsp. nov. Suva, fairly common, Fiji, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 326.

*Bistolida stolidi thakau* subsp. nov. Suva type loc., Nadroga, Kadavu; *B. fluctuans nandronga* subsp. nov. Nadroga from a single specimen [!], W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 318.

*Blasicrura rhinoceros vivia* subsp. nov. Suva type loc., Nadroga and throughout Fiji, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 323.

*Callistocypraea aurantium turanga* subsp. nov. type loc., Nadroga, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 329.

*Cribraria cribraria northi* subsp. nov. Nadroga, type loc., Bega Kadavu, Levuka, Taveuni, Suva, Fiji Ids., W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 318.

*Cypraea lynx, pantherina, arabica, tigris*, figs. in colour, P. A. ROBERT 304.—*C. tigris volai* Suva, type loc., common throughout Fiji; *C. t. amboolu* Suva, and mostly in eastern parts of Fiji, subspp. nov., W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 332.—*C.* corrections re data given by Schiølder, W. M. INGRAM 169.

†*Cypraea sabuloviridis* Whetfield and *C. mortonii* Galb. considered to be of doubtful specific rank, W. M. INGRAM Bull. Amer. Paleont. Ithaca 27 104 1942 p. 19 (109).

†*Cypraeidae* type fossils of North America, W. M. INGRAM 168.

*Erosaria (Erosaria) helenae naseae* subsp. nov. Suva, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 315.

*Erronea nimisserans kalavo* Suva, common throughout Fiji; *E. n. vivili* Suva subspp. nov. Fiji, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 324.

*Evanaria asellus kawakawa* Suva type loc., Levuka, Kadavu, Taveuni, Nadroga; *E. hirundo korolevu* Korolevu type loc., Bega, Kadavu, Taveuni, Suva, Nadroga; p. 320: *E. ursellus vitiensis* Suva type loc., Bega, Kadavu, Taveuni, Nadroga p. 321; subspp. nov. Fiji, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943.

*Leporicyprea mappa rewa* subsp. nov. Suva, moderately frequent throughout Fiji, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 329.

*Lyncina lynx pacifica* subsp. nov. common throughout Fiji, Suva type loc., W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 330.

*Melicerona melvilli vatu* subsp. nov. Suva type loc., Bega, Kadavu, Levuka, Nadroga, W. R. STEADMAN & B. C.

COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 322.

*Monetaria (Monetaria) moneta erua* Suva type loc. throughout Fiji; *M. (M.) moneta etolu* Suva type loc., and throughout Fiji, subspp. nov., W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 317.

*Solvadusta subviridis kesata* subsp. nov. Suva, Fiji Ids., W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 322.

*Palangerosa cylindrica wangga* subsp. nov. Suva, Fiji Ids., W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 323.

*Palmadusta lutea yaloka* subsp. nov. Nadroga, Fiji, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 322.

*Paulonaria minoridens suvaensis* subsp. nov. Suva type loc. Fiji Ids., W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 319.

*Ponda ventriculus topee* subsp. nov. Kadavu, rare in Fiji, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 331.

*Primovula (Pseudosimnia) vanhyningi* sp. nov. 50 fms. off Boynton Beach, Florida, MAXWELL SMITH Naut. 54 2 1940 p. 46 pl. ii f. 8.

*Siphocypraea* Heilprin 1887, proposed as a subgenus, "here given full generic rank," W. M. INGRAM p. 17 (107) 168.

†*Solcocypraea* proposed as a subgenus by Conrad, 1865, "here given full generic rank," *Cypraea lintea* Conrad, 1847, type loc. Vicksburg, Mississippi, Oligocene, W. M. INGRAM Bull. Amer. Paleont. Ithaca 27 104 1942 p. 18 (108) pl. iii f. 12, 13.

*Staphylea (Staphylea) nukulan* sp. nov. Nukulan type loc., Levuka, Kadavu, Suva, Nadroga; *S. (Purperosa) purperosa ruvaya* subsp. nov. Suva type loc., Levuka, Kadavu, Nadroga, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 312.

*Talostolida subteres vava* subsp. nov. Suva type loc., Bega, Kadavu, Nadroga, W. R. STEADMAN & B. C. COTTON Rec. S. Aust. Mus. Adelaide 7 4 1943 p. 319.



## TONNACEA.

†*Cabestana manawatuna* sp. nov. Tahoraita, New Zealand, Lower Wukumaruan, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 197, pl. xxix f. 17.

*Charonia tritonis* fig. in colour, P. A. ROBERT 304.

*Cypræacassis* in the Western Atlantic, W. J. CLENCH & R. T. ABBOTT 82.

*Dalium* in the Western Atlantic, W. J. CLENCH & R. T. ABBOTT 82.

†*Dalium ecuadoriana* sp. nov. Upper Oligocene, Esmeraldas tuffaceous shales, Punta Gorda, a few miles W. of mouth of Rio Esmeraldas, Prov. of Esmeraldas, northern Ecuador, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 77 (229) pl. ix f. 2, 3.

†*Mauicassis* subgen. nov. of *Xenophalium* Iredale 1927, type *Phalium fibratum* Marshall and Murdoch 1920 Tr. [N.Z.] Inst. 52 p. 131 pl. viii f. 16, 17, Lower Pliocene, New Zealand, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 197.

*Morum* in the Western Atlantic, W. J. CLENCH & R. T. ABBOTT 82.

*Oocorys bartschi* sp. nov. dredged 79–140 fms. south of Tortugas, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 197 pl. xx f. 16.

*Phalium areola* fig. in colour, P. A. ROBERT 304.

†*Turehua* subgen. nov. of *Plesio-triton* type *Latirus dubius* Marshall, J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 189 pl. xxvi f. 102.

†*Xenophalium* (*Mauicassis*) *lilliei* Waitotaran p. 198 pl. xxix f. 18; *X. (M.) marwicki* Upper Waitotaran p. 199 pl. xxix f. 19, spp. nov. New Zealand, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943.

## PTENIOGLOSSA.

## EPITONIACEA.

†*Clathrus makayi* sp. nov. Isis bed, Campbell's Beach, Allday Bay, New Zealand, J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 190 pl. xxvii f. 33.

*Epitonium* (*Cirsotrema*) *pilsbry* [sic] sp. nov. dredged on rocky reef off Palm Beach, Florida, 75 fms., T. L. MCGINTY

Naut. 54 2 1940 p. 62 pl. iii f. 13.—*E. (Cirsotrema) lineatum* sp. nov. dredged off Palm Beach in 75 fms., J. S. SCHWENGEL Nautilus Philad. 56 3 1943 p. 77 pl. vii f. 6.—†*E. (Boreoscala) greenlandicum smithi* subsp. nov. Pliocene, near Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha, Wis. 17 1 1943 p. 82 pl. ii f. 2.—†*E. (Ferminoscala) ferminianum* Dall, A. A. OLSSON 268.

†*Ferminoscala durhami* pl. iv f. 31; *F. whitei* pl. iv f. 32, 33: spp. nov. Miocene, Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 46.

†*Goniscala* gen. nov. Scalidae type *G. diurna* sp. nov. Siltstone, Allday Bay, New Zealand, J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 190 pl. xxvi f. 9.

*Ianthina exigua*, early stages, R. L. ALBANY 2.

## PYRAMIDELLACEA.

*Balcis conchila* sp. nov. Miocene Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 36, 43 pl. iv f. 5.

*Chrysallida rotundomontana* sp. nov. Miocene Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 36, 43 pl. iv f. 28.—*C. kazusan*, *tubutubus*, *C. (Pyrgulina) simokitana*, *bokotaensis*, spp. nov. Japan, S. NOMURA Jubilee Publ. Comm. 60th Birthday, Prof. H. Yabe 1 1939 pp. 119–156 (abst. in Japan J. Geol. and Geogr. 18 3 1941 2nd pag. 24) [vide Title 285 Zool. Rec. vol. 79].

*Lioconcha ornata*, *castrensis*, figs. in colour, P. A. ROBERT 304.

*Menestho sudoensis*, *M. (Oscilla) ogasaensis*, *yokohamensis*, *M. (Menesthella) tarukiensis*, *M. (Kleinella) awaziensis*, *M. (Leucotina) sizuokaensis*, *sizuokaensis*, *dainitii* spp. nov. Japan, S. NOMURA Jubilee Publ. Comm. 60th Birthday, Prof. H. Yabe 1 1939 pp. 119–156 (Abstr. 59 in Jap. J. Geol. Geogr. 18 3 1941 2nd pag. 24 [vide Zool. Rec. 75, Title No. 285]).

*Odostomia kurosiwo*, *tanegasimana setoutiensis*, *tokiwana*, *pseudoperforata*; *O. (Amaura) sekisimana*, *sasagensis*,

*oyasiwo*, *O. (Sinuatodostomia) angustitestulata*, *O. (Marginodostomia) misakiensis* spp. nov. Japan, S. NOMURA Jubilee Publ. Comm., 60th Birthday, Prof. J. Yabe 1 1939 pp. 119-156 (Abstr. in Japan J. Geol. Geogr. 18 3 1941 2nd pag. 24) [vide Title 285, Zool. Rec., Vol. 79].

†*Odostomia (Iolaea) amiantopsis* sp. nov., Pliocene, near Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha Wis. 17 1 1943 p. 83 pl. xi f. 6.

†*Pyrgiscilla festiva* sp. nov. Siltstone, Allday Bay, New Zealand (Awamoan), J. MABWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 191 pl. xxvi f. 17-19 pl. xxvii f. 32.

*Pyramidella ogasawarazimana*; *P. (Tiberia) yabei*; *P. (Eulimotiberia) navenariensis* spp. nov., S. NOMURA Jubilee Publ. Comm. 60th Birthday Prof. H. Yabe 1 1939 pp. 119-156 (Abstr. 59 in Japan J. Geol. Geogr. 18 3 1941 2nd pag. 24) [vide Zool. Rec. 75, Title No. 285].

*Syrnola tagaensis*, *miyagusakensis*, *hanzawai*, *toyamai*, *titizimana Susakiensis*, *sukegawana* spp. nov., S. NOMURA Jubilee Publ. Comm. 60th Birthday Prof. H. Yabe 1 1939 pp. 119-156 (Abstr. 59 in Japan J. Geol. Geogr. 18 3 1941 2nd pag. 24) [vide Zool. Rec. 75, Title No. 285].

†*Syrnola scandix* sp. nov. Miocene Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 50 pl. iv f. 24, 29, 30.

*Turbonilla kururiensis*, *totakidoensis*, *somelensis*, *pseudactopora*, *okadaensis*, *tuberculosa*, *tombensis*; *T. (Ptycheunlimella) mizuhonica*; *T. (P.) yabei*, *yabei natukuaensis*; *T. (Pyrgiscus) miyakoensis*, *nisihigasaensis Eoninensis*; *T. (Mormula) endoi*; *T. (Dunkeria) kawanoensis* spp. nov. Japan, S. NOMURA Jubilee Publ. Comm. 60th Birthday Prof. H. Yabe (Abstr. 59 in Jap. J. Geol. Geogr. 18 3 1941 2nd pag. 24) [vide Zool. Rec. 75, Title No. 285].

†*Turbonilla (Pyrgolampros) mariposa* sp. nov. pp. 37, 52 pl. iv f. 19, 25.—†*T. (Pyrgiscus) bravoensis* sp. nov. pp. 37, 51 pl. iv f. 20, 26, 27, Miocene, Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943.

## STENOGLOSSA.

(α) RHACHIGLOSSA.

## MURICACEA.

*Aspella elizabethae* sp. nov. Vol. 53 pl. x f. 7, Naut. Jan. 1940, T. L. MCGINTY Naut. 54 2 1940 p. 63, Middle Sambo Shoals, nr. Key, West Fla.

*Drupa didyma* sp. nov. dredged in 200 feet off Palm Beach, Florida, J. S. SCHWENGEL Nautilus Philad. 56 3 1943 p. 76 pl. vii f. 7.

†*Eupleura harbisoni* sp. nov. Lower Miocene, Gillette marl pits, Silverdale, North Carolina, H. G. RICHARDS J. Paleont. Menasha, Wis. 17 5 1943 p. 523 pl. lxxxv f. 18.

*Murex (Jaton) gaza* off Key, pl. ii f. 3; *M. anniae* Florida p. 44 pl. ii f. 1, spp. nov. (p. 44); *M. recurvirostris delicatus* Lake Worth; *M. r. citrinus* Key Largs. subspp. nov. (p. 45), Florida, MAXWELL SMITH Naut. 54 1940.—*M. (Murexsul) ednae* sp. nov. Japan, M. SMITH Naut. 54 2 1940 p. 43 pl. ii f. 10.—*M. ternispina* Lk. fig. in colour; *M. saxatilis*, fig. in colour, P. A. ROBERT 304.—*M. nigratus* Ph. growth series, A. SORENSSEN 338.—†*M. davisii* f. 1, 2; *M. kellumi* f. 3, 4 spp. nov. Miocene, North Carolina, H. G. RICHARDS J. Paleont. Menasha, Wis. 17 5 1943 p. 524 pl. lxxxv.

*Purpura lapillus*, N. F. McMILLAN 224.

*Sconsia* in the Western Atlantic, W. J. CLENCH & R. T. ABBOTT 82.

*Typhis fordii* sp. nov. 5 miles west of Nassu, on the northeast coast of New Providence, H. A. PILSBRY Nautilus Philad. 57 2 1943 p. 40 pl. vii f. 4.

*Thais lapillus* (L.) observations on local movements, R. W. D. DEXTER 102.—*Thais* morphological notes, J. P. E. MORRISON 246.

†*Typhis tepunga* sp. nov. Tahoraite calcareous sandstone from Waitotaran, New Zealand, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 205 pl. xxx f. 21.—†*T. (Talityphis) lampada* sp. nov. miocene, Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 53 pl. iii f. 14, 19, 23.

*T. expansus* Sow. subgen. type of *Talityphis* figured pl. iii f. 20, A. M. KEEN.—†*T. (Talityphis) costaricensis* sp. nov. Pliocene mouth of the Quebrada Peñitas, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 76 (228) pl. xii f. 5, 8.

*Urosalpinx cinerea*, M. R. CARRIKER 71.

†*Zeotrophon murrayae* sp. nov. Hunterville-Turakina Valley Road (Upper Nukumaruan, p. 205 pl. xxxi f. 30); *Z. elegans* Kumeroa p. 205 pl. xxxi f. 32, spp. new, New Zealand, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943.

### BUCCINACEA.

†*Aeneator drevi* sp. nov. Castlecliff, New Zealand (Castlecliffian), one specimen, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 200 pl. xxix f. 13, 15.—†“*Aeneator*” *problematicus* sp. nov. Takapau, New Zealand (sandy facies of Waitotaran), C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 200 pl. xxx f. 26.

†*Aliofusus* (?) *sayri* sp. nov. Raritan, Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. Nat. Sci. Philad. 95 1943 p. 28 pl. v f. 17.

†*Anachis watsonae* sp. nov. Miocene, Round Mountain Silt, California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 36, 42 pl. iv f. 1, 2.

*Antemetula* nom. nov. for “*Metula* of Woodring . . . and other authors,” with genotype *Buccinum metula* Hinds, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 199.

†*Antizafra obtusa* p. 207 pl. xxxi f. 31; *A. obsoleta* p. 207 pl. xxxi f. 29 spp. nov., Ongaofa Rd. (Petane Series), New Zealand, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943.

†*Austrosipho masoni* Takapau, Tutamoe Series p. 201 pl. xxx f. 27; *A. takapauensis* Takapau p. 202 pl. xxx f. 23, spp. nov., New Zealand, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943.

*Bullia* notes on the Madras species, M. D. CRICHTON 95.

†*Busycon contrarium* (Conrad); *B. carica* (Gmelin), two fossil species ex-

hibiting a second spine row, B. SMITH 332.

*Cantharus lugubris* C. B. Ad., California, figs., T. BURCH 68.

†*Cantharus amycus* sp. nov. Lower Pliocene or Upper Miocene, Burica sandstones, Burica Point, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 68 pl. xi f. 1.

*Charitodoron pasithea* sp. nov. 430–630 fms. off Cape Point, S.A., J. R. LE B. TOMLIN J. Conchol. London 22 3 1943 p. 50 text-fig.

†*Columbella (Astyris) rosacea seawardensis* subsp. nov. Pliocene, nr. Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha, Wis. 17 1 1943 p. 82 pl. x f. 23.

†*Cominula attenuata* sp. nov. Tahoraita “Petane and Scinde Id.” C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 203 pl. xxx f. 25.

†*Cotonopsis* subgen. nov. of *Strombina* [sub]genotype *Strombina* (C.) *panacostaricensis* sp. nov. Tuffaceous shale, west side of the Burica Peninsula, about five miles north of Punte Burica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 pp. 5 (157), 75 (227), pl. x f. 5.

†*Cymatophos panamensis* sp. nov. Rio la Vaca, Costa Rica, Pliocene, A. A. OLSSON Bull. Amer. Paleont. Ithaca, 27 106 1942 p. 71 pl. ix f. 1.

†*Ellicea perobtusa* sp. nov. Tahoraita, New Zealand (calcareous sandy mudstone facies in the Waitotaran, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 202 pl. xxix f. 11, 16.

†*Falsicolus teuriensis* sp. nov. Je Uri Rd. Mangaotero, New Zealand, Tutamoe Series, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 204 pl. xxx f. 20.

*Fasciolaria princeps* Sow. figs., A. SORENSSEN 338.

*Fusinus hyphalus* sp. nov. off Tosa, Japan, 100 fms., M. SMITH Naut. 54 2 1940 p. 43 pl. ii f. 9.

†*Fusinus mellisus* sp. nov. Tertiary Quebrada Mellisa, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 65 pl. ix f. 7.

*Fusus dupitithouarsi* Knr. growth series figs., A. SORENSSEN 338.

†*Hanetia pelicana* sp. nov. Burica sandstone Burica Point (Lower Pliocene or Upper Miocene) p. 66 pl. iii f. 3; *H. anomala burica* subsp. nov. Quebrada Mellisa p. 67 pl. ii f. 2; *H. (Fusinos-teira) alternata* Nelson p. 67 pl. x f. 1, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.

†*Latirus penitus* sp. nov. Pliocene Quebrada Peñitas, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 64 pl. viii f. 10.

*Longitrella* subgen. nov. of *Mitrella* [sub]genotype *Mitrella* (L.) *vespertina* sp. nov. Pliocene, Charco Azul, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 pp. 5 (157), 73 (225) pl. x f. 9.

†*Macrozafra pliocenica* sp. nov. Ongaonga Road (Petane Series), C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 208 pl. xxx f. 22.—†*M. formosa* sp. nov. Siltstone, Allday Bay, New Zealand (Awamoan), J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 191 pl. xxvi f. 8.

*Melongena patula* Brod. showing growth figs., A. SORENSON 338.

†*Melongena margaritana* sp. nov. Pleistocene, Margarita Island, Venezuela, H. G. RICHARDS J. Paleont. Menasha, Wis. 17 1 1943 p. 120 figs. 1, 2.

†*Metula pilsbryi* sp. nov. Pliocene, Rio la Vaca, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 69 pl. ix f. 8.

†*Mitrella* (*Mitrella*) *anchuela* sp. nov. Miocene, Round Mountain Silt (Temblor) California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 48 pl. iv f. 12.

†*Mohnia moffiti* sp. nov. Pliocene, nr. Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha, Wis. 17 1 1943 p. 80 pl. x f. 11, 36.

†*Nassa* (*Uzita*) *terryi* p. 70 pl. viii f. 2, 7, 9; *N. (U.) armulla* p. 71 pl. viii f. 6, spp. nov. Pliocene, Charco Azul, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.

†*Phos* (*Antillophos*) *rutschi* sp. nov. Quebrada Peñitas, Costa Rica (Pliocene), A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 73 pl. ix f. 5.

*Psarostola* gen. nov. p. 198 [of Columbelloidea], type *Columbella monilifera* Sow., West Indies; *P. monilifera sparsipunctata* subsp. nov. 45 fms. S.E. of Fowey Light, Florida p. 198 pl. xx f. 11, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943.

†*Strombina fusiformis penita* subsp. nov. Pliocene Shales of Quebrada Peñitas, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 74 (226) pl. x f. 3, 6, 8, vide etiam *Cotonopsis*.

†*Zemitrella subsuturalis* sp. nov. Ongaonga Road, Petane Series, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 207 pl. xxxi f. 28.

†*Zephos tuturewa* sp. nov. Mangao-toro east of Tuturewa Mountain, New Zealand (Opoitian), C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 204 pl. xxx f. 24.

## VOLUTACEA.

*Aulica rossiniana* fig. in colour, P. A. ROBERT 304.

†*Austromitra quennelli* sp. nov. Takapau Tahoraite, New Zealand, sandstone facies of the Waitotaran C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 199, pl. xxix f. 12.

†*Baryspira gulosa* Takapau opoiti or Napiri Series, opoitian or Taranakian p. 208 pl. xxxi f. 35, 36; *B. (Alcocspira) paeroa* Paeroa, Mangaotore opoitian concretionary limestone p. 208 pl. xxxi f. 33, spp. nov., New Zealand, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943.

†*Zeadmete kumeroa* sp. nov. Tahoraite (Uppermost Lower Nukumaruan), New Zealand, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 206 pl. xxxi f. 34.

*Cancellaria reticulata adelae* subsp. nov. Little Duck Key, Florida, H. A. PILSBRY Nautilus 54 2 1940 p. 54 pl. iii f. 1.

†*Cancellaria* (*Cancellaria*) *penita* Quebrada Peñitas p. 59 (211) pl. viii f. 4, 8; *C. (Bivetopsis) charapota* Middle Miocene p. 61 (213) pl. viii f. 3, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.



†*Cancellaria (Calcarata) peninsularis* sp. nov. p. 62 (214) pl. xi f. 9, Quebrada Peñitas; *C. colombiana* sp. nov. Lower Miocene, p. 63 (215) pl. ix f. 4, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.

†*Cancellaria (Bivetopsis) moorei pachia* subsp. nov. (Miocene?), Dike near Belle Glade, Florida MAXWELL SMITH Naut. 54 2 1940 p. 45 pl. ii f. 2.

†*Charcolleria* subgen. nov. of *Cancellaria* [sub]genotype *Cancellaria perdici-ana* sp. nov. Lower Miocene, Puerto, Colombia, pp. 5 (157), 61 (213) pl. viii f. 5; *C. (Charcolleria) terryi* Quebrada Peñitas p. 62 (212) pl. xi f. 9, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.

*Harpa articularis, ventricosa*, figs. in colour, P. A. ROBERT 304.

~*Marginella evelynae* Hillsborough Inlet, East Florida p. 113 pl. xiv f. 24, 25; *M. nobiliana* 70 fms. off Palm Beach p. 114, pl. xiv f. 19, 20, spp. nov. F. M. BAYER Nautilus Philad. 56 4 1943.

*Marginella beali* sp. nov. dredged off Lake Worth, Florida, 84 fms., J. L. MCGINTY Naut. 54 2 1940 p. 62 pl. iii f. 10, 11.

*Marginella jaspidea* sp. nov. dredged off Palm Beach, 66 fms., J. S. SCHWENGEL Naut. 54 2 1940 p. 49 pl. iii f. 12.

*Marginella denticulata destina* subsp. nov. dredged in 18–20 fms. off Destin, N.W. Florida p. 75 pl. vii f. 1; *M. idiochila* sp. nov. 90 fms. off Palm Beach, Florida p. 75 pl. vii f. 2, 3, J. S. SCHWENGEL Nautilus Philad. 56 3 1943.

†*Mauidrillia browni* sp. nov. Siltstone, Allday Bay, Awamoan, New Zealand, J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 192 pl. xxvii f. 34.

*Mauira* nom. nov. for *Mania* Marwick 1926, non Blackburn 1885 p. 194 Coleopt., J. MARWICK Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 192.

*Mitra papalis, episcopalis* figs. in colour, P. A. ROBERT 304.

†*Mitra cyclica* sp. nov. Pliocene Quebrada Peñitas, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 64 pl. vii f. 1.

*Oliva porphyria* fig. in colour, P. A. ROBERT 304.

*Oliva irisans* figs. in colour, P. A. ROBERT 304.

*Olivella watermani* sp. nov. dredged 80 fms. off Palm Beach, Florida, T. L. MCGINTY Naut. 54 2 1940 p. 64.

†*Olivella ischnon* sp. nov. Miocene Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 50 pl. iv f. 3, 4.

*Pusia hendersoni* dredged in 30 fms. off Bears Cut, Miami, Florida, p. 200 pl. xx f. 12; *P. epiphanea* dredged in 15 fms. off Tortugas, Florida p. 201 pl. xx f. 14, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943.

*Pusiolina aresta* sp. nov. 3–6 fms. at Santa Rosa, north coast of Pinar del Rio, Cuba, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 201 pl. xx f. 1.

STENOGLOSSA.

(β) TOXOGLOSSA.

#### CONACEA.

*Bartschia* gen. nov. type *Bartschia significans* sp. nov. dredged off the Tortugas, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 199 pl. xx f. 17.

*Bellaspira* (?) *pentapleura* sp. nov. dredged in 45 fms. off Palm Beach, Florida, J. S. SCHWENGEL Naut. 54 2 1940 p. 51 pl. iii f. 3, 3A.

†*Borsonia (Borsonella) adamsi* p. 58 (210) pl. xii f. 1; *B. (Borsonella) Larrisi* p. 59 (211) pl. xii f. 6, 7, spp. nov. Charco Azul, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.

†*Buridrillia* p. 51 (263) subgen. nov. of *Clathrodrillia* [sub]genotype *Clathrodrillia (B.) panarica*, Quebrada Peñitas, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 pp. 5 (157), 53 (205) pl. vii f. 4, 5, 7.

†*Clathrodrillia harrisi* sp. nov. Quebrada Peñitas, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 50 (202) pl. ix f. 10, pl. xi f. 8.

*Clavutula asamusiensis* sp. nov. North-east Honjū, Japan, S. NOMURA & N. ZINBO Rec. Bull. Saito Ho-on Kai Mus. Sendai 19 1940 (pp. 17–25).

*Conus imperialis*, *textile*, *princeps*. figs. in colour, P. A. ROBERT 304.—*C. princeps* L., *C. purpurascens* Brod., *C. virgatus* Rve., *C. regularis* Sow., *C. comptus* Gld., *C. mahogani* Rve., *C. perplexus* Sow., *C. archon* Brod., *C. gladiator* Brod., *C. nux* Brod., figs., A. SORESENSEN 338.

†*Conus* (*Leptoconus*) *arcuatus vacuanus* sp. nov. Quebrada Peñitas, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 49 (201) pl. vi f. 11, 12.

*Crassispira* (*Crassispirella*) *mesoleuca* sp. nov. Looe Key Reef, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 202 pl. xx f. 15.

*Crassispira phasma* sp. nov. dredged off Palm Beach 12 fms., Florida, J. S. SCHWENGEL Naut. 54 2 1940 p. 49 pl. iii f. 8.

*Eubela mcgintyi* sp. nov. 80 fms. off Lake Worth, Florida, J. S. SCHWENGEL Nautilus Philad. 56 3 1943 p. 76 pl. vii f. 4, 5.

†*Fusiturricula woodringi* sp. nov. Charco Azul, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 53 (205) pl. vii f. 2.

*Glyphostoma pilsbryi* sp. nov. dredged off Palm Beach 100 fms., Florida, J. S. SCHWENGEL Naut. 54 2 1940 p. 51 pl. iii f. 9.

†*Hastula gnomon* sp. nov. Miocene. Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 47 pl. iv f. 11.

*Lora siogamensis* sp. nov. North-east Honsû, Japan, S. NOMURA & N. ZINBÔ Res. Bull. Saito Ho-on Kai Mus. Sendai 19 1940 (pp. 17-25).

*Mangelia yuraensis*, *rikuyenica* spp. nov. North-east Honsû, Japan, S. NOMURA & H. ZINBÔ Res. Bull. Saito Ho-on Kai Mus. Sendai 19 1940 (pp. 17-25).

†*Moniliopsis electilis* sp. nov. Miocene, Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 49 pl. iv f. 15.

†*Oenopota mortiei* sp. nov. Pliocene, nr. Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha, Wis. 17 1 1943 p. 79 pl. x f. 2, 3.

†*Pleurotomella* (*Phymorhynchus*) *agina* sp. nov. Charco Azul, Burica Peninsula, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 56 (208) pl. x f. 10.

†*Polystira panamensis* sp. nov. Charco Azul, Costa Rica, A. A. OLSSON, Bull. Amer. Paleont. Ithaca 27 106 1942 p. 50 (202) pl. xii f. 4.

*Pyrgocythara filosa* sp. nov. Marco, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 93 3161 1943 p. 203 pl. xx f. 2.

*Terebra dimidiata*, *maculata*, *subulata*, figs. in colour, P. A. ROBERT 304.

†*Terebra* (*Strioterebrum*) *guanabana* sp. nov. Rio Guanabaron p. 46 (198) pl. xi f. 4; *T. (S.) vaca* Rio La Vaca p. 47 (199) pl. xi f. 6, 7; *T. (S.) panamillata* Rabo de Puerco p. 48 (200) pl. xi f. 3, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.

†*Turricula dulcia* p. 54 (206) pl. vii f. 3, 6; *T. (Knefastia) andesita* p. 55 (207) pl. vii f. 8, Charco Azul formation, Quebrada Peñitas, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.

## Opisthobranchia.

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†*Avellana* (?) *raritana* sp. nov. Raritan, Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. nat. sci. Philad. 95 1943 p. 28 pl. v f. 16.

*Cylichna magna* sp. nov. Greenland, H. LEMCHE Medd. Grønland 121 7 1941 p. 15.

†*Cylichna temblorensis* pl. iv f. 13, 14; *C. (?) loismartinae* pl. iv f. 16, 18, spp. nov. Miocene, Round Mountain Silt (Temblor), California, H. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 44.

*Cylichnella* (*Bullinella*) *nucleola nomeana* subsp. nov. Pliocene, Inner Submarine Beach, near Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha, Wis. 17 1 1943 p. 79, pl. x f. 1.

*Navanax inermis* (Cooper) Golgi apparatus, L. G. & E. K. WORLEY 388.

*Retusa matusimana* sp. nov. Matusima Bay, Japan, S. NOMURA Res. Bull. Saite Ho-On Kai Mus. Sendai 19 1940 (pp. 1-12).

†*Ringicula* (*Ringiculella*) *costaricensis* sp. nov. Pliocene, Quebrada Peñitas, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 79 (231) pl. vi, f. 7, 8.

†*Volvulella gluma* sp. nov. Miocene Round Mountain Silt (Temblor), California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 37, 54, pl. iv f. 10.

### PTEROPODA.

†*Archaeoconularia attenuata* from the Rochester, Ontario; *A. membranacea* (ex Ringenberg MS.), from the Rochester, New York, spp. nov. from the Rochester formation, G. W. SINCLAIR Trans. roy. Soc. Canada (3) 37 1943 p. 122.—†A. Bouček 1939, may be synonymous with *Palaenigma*, Walcott 1886, G. W. SINCLAIR 327.

†*Eoconularia* gen. nov. type *Conularia loculata* Wiman 1894; *E. amoena* from the Trenton Ottawa, and *E. (?) humberia* from the Dundas, Weston, Ontario, spp. nov., G. W. SINCLAIR Trans. roy. Soc. Canada (3) 37 1943 p. 122.—†*E.* gen. nov. [Conulariidae], type *E. loculata* (Wiman) Silurian, Island of Gotland, G. W. SINCLAIR Canad. Field Nat. 57 7-8 1943 p. 123.

*Oxynoe panamensis* sp. nov. north shore of Bocas Island, Province of Bocas del Toro, Panama, H. A. PILSBRY & A. OLSSON Nautilus Philad. 56 3 1943 p. 80 pl. viii f. 8, 9.

### Nudibranchia.

### DORIDACEA.

Triophidae. fam. nov., including genera *Plocamopherus*, *Caloplocamus*, *Tropha*, *Kalinga*, N. H. ODHNER Göteborgs Vetensk Samh. Handl. (6) 1B 11 1941 p. 12.

*Greilada* not separated generically from *Polycera*, and made a section of *Polycera*, p. 11, N. H. ODHNER 264.

*Polycera risbeci* nom. nov. for *P. lessoni* "Orb" Risbec [now *P. lessoni* Orb], N. H. ODHNER Göteborgs Vetensk Samh. Handl. (6) 1B 11 1941 p. 14.

*Polycera marplatensis* Franceschi 1928, a distinct species; *P. salamandra* Labbé 1931, a colour var. of *P. quadrilineata* Müller; *P. conspicua* Allan 1932; *P. nigrocrocea* both = *P.*

*capensis* Q. & G. 1924 p. 14, N. H. ODHNER 260.

"*Polycerella*" zoobotryon Smallwood 1910 belongs to fam. Goniodorididae vide *Bermudella* gen. nov., p. 15, N. H. ODHNER 264.

*Bermudella* gen. nov. Goniodorididae, type *Polycerella zoobotryon* Smallwood 1910, N. H. ODHNER Göteborgs Vetensk Samh. Handl. (6) 1B 11 1941 p. 16.

Gymnodorididae, including *Gymnodoris Nembrotha*, p. 15, N. H. ODHNER 260.

*Polycera*—synopsis of the species N. H. ODHNER 264.

*Polycera* (*Greilada*) *messinensis* sp. nov. Swedish West Coast, N. H. ODHNER Göteborgs Vetensk Samh. Handl. (6) 1B 11 1941 p. 7 figs. 5-9.

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*Amerianna gabrieli* nom. nov. for *Physa* (*Ameria*) *truncata* Adams 1861, P.Z.S. 143, not Bourguignat 1856 Amer. Malac. 1 170; *Calliope* R., S. Queensland, B. C. COTTON Trans. roy. Soc. S. Aust. 66 1 1942 p. 77 — *A. obesula* nom. nov. for *Physa* (*Ameria*) *obesa* H. Ad. 1861, not *Physa obesa* De Kay 1843; *A. compar* sp. nov. Lennard River, N.W. Australia, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 221,

*Ameriella* subgen. nov. p. 147 [non des.] for *Amerianna bonushenricus*, B. C. COTTON 92.

*Aplexa hypnorum* in Staffs., B. BRYAN 66.

*Australorbis glabratus* Say, a host of *Schistosoma mansoni*, G. W. LUTTER-MOSER 214.

*Austropeplea* gen. nov. [Lymnaeidae], type *Limnaea papyracea* Tate 1889 Tr. Roy. Soc. S. Aust. 3 105 pl. iv f. 5 = *Limnaea aruntalis* Cotton & Godfrey 1933 Gaster. S. Aust. 36. B. C. COTTON Trans. roy. Soc. S. Aust. 66 1-1942 p. 80.

"*Bullinus contortus*" Michaud 1829, F. G. MARILL, L. ALOAY & J. C. MUSSO 228.

*Glacidorbis* gen. nov. Planorbidae, type *G. hedleyi* sp. nov. Blue Lake, Mt. Kosciusko, N.S.W., T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 227.

*Glacilimnea gelida* "gen et sp. nov." [sp. only des.] Blue Lake, Mount Kosciusko, N.S.W., T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 214.

*Glyptamoda* gen. nov. Bullinidae, type *Physa aliciae* Reeve; *G. cosmata* sp. nov. Calala Lagoon, nr. Tamworth, N.S.W., T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 220.

*Glyptaniscus ordessus* Chichester Dam, Hunter River district; *G. metaurus* Armidale, N.S.W., spp. nov., p. 225; *G. hesperus* sp. nov. Lennard R., N.-W. Australia; *G. coranus* nom. nov. for *Planorbis fragilis* Tate 1896, not Smith 1882, p. 226; *G. speranus* sp. nov. Narrabri, Namoi R., N.S.W., p. 227, T. IREDALE Aust. Zool. Sydney 10 2 1943.

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*Isidorella majuscula* nom. nov. for *Physa brazieri* var. *major* Smith 1882, Burnett River Queensland; *I. bradshawi* Tambellup, S.-W. Australia; *I. moola* Moolah West, N.S.W., spp. nov., p. 223; *I. montana* Jindabyne, 3,200 feet Mt. Kosciusko, N.S.W., sp. nov., p. 224, T. IREDALE Aust. Zool. Sydney 10 2 1943.

*Legrandia instigata* sp. nov. Lake St. Clair, Tasmania, named "in order to induce investigation," T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 230.

*Lenameria* gen. nov. Bullinidae, type *Physa gibbosa* Gould; *L. renola* sp. nov., Chichester Dam, Hunter River district, N.S.W., T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 215.

*Limnaea stagnalis appressa* Say variation, developmental changes and radular replacement, M. R. CARRIKER 72.—*Limnaea stagnalis* experiments on life history, L. E. NOLAND & E. REICHEL, 256A.—*L. stagnalis* host of *Syngamus trachea* Mont., K. M. RYZKIKOV 311.—*L. palustris* in captivity, A. W. STELFOX 345.—*Limnaea* subgenera, H. WATSON 370.

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*Pettancylus* gen. nov. Ancyliidae, type *Ancylus tasmanicus* Ten-Woods; *P. occidentalis* Tambellup, S.W.A.; *P. importunus* Dry R. Quaaamaa, nr. Bermagui, N.S.W., p. 228; *P. dextrenus* N. Australia; *P. epenus* Barrier Ranges (Derby), N.-W. Australia; *P. enigma* Chichester Dam, Hunter River district, spp. nov. p. 229, T. IREDALE Aust. Zool. Sydney 10 2 1943.

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*Problancylus* gen. nov. Ancyliidae type *Gundlachia petterdi* Hedley = *eremia* Cotton & Godfrey, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 229.

*Pygmaniscus parvus* sp. nov. River Torrens, South Australia, B. C. COTTON Trans. roy. Soc. S. Australia 67 1 1943 p. 148 pl. xviii f. 11, 12.—*P. leonatus* Canberra; *P. pelorius* Armidale, N.S.W., spp. nov., T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 224.

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*Tasmadora sorrellensis* sp. nov. Lake Sorrell, Middle Tasmania, B. C. COTTON Trans. roy. Soc. S. Australia 67 1 1943 p. 147, 148 pl. xvii f. 17, 18.

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*Nesopupa mokaensis* nom. nov. for *Pupa (Pagodella) ventricosa* H. Ad. 1867 non *Pupa ventricosa* Drap. 1801, A. S. KENNARD Mauritius Inst. Bull. 2 3 1943 pp. 126, 127.

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*Ceciloides connollyi* sp. nov. Signal Station, Gibraltar (Connolly), J. R. LE B. TOMLIN Jour. Conchology London 22 1 1943 p. 23.

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*Arion hortensis*, *subfuscus*, *ater*, in gardens, ANON 8.—*A. ater alba* at Hazels Cross, Staffs., B. BRYAN 66.—*A. circumscriptus* in Indianapolis, Indiana, G. R. WEBB 372.

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†*Gemma magna striata* var. nov. Gillette marl pits, Silverdale, North Caroline, Lower Miocene, H. G. RICHARDS J. Paleont. Menasha, Wis. 17 5 1943 p. 522 pl. lxxxiv f. 24.

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*Milax gracilis sowerbyi* in gardens, ANON 8.—*M. gagates, gracilis* and *sowerbyi* and Potato tubers, G. F. WILSON 376.

*Oxychilus birsteinii* sp. nov. Transcaucasus, B. N. Tzvetzkow Bull. Soc. Nat. Moscou Sect. Biol. N.S. 49 3-4 1940 p. 57 text fig. 1.—O., H. WATSON 370.

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spp. nov. Mexico, P. BARTSCH J. Wash. Acad. Sci. 33 2 1943.

*Cerion cabocruzensense* "Pilsbry & Torre" = "*C. striatellum*" in Man. Conch 14 p. 278 pl. xlv f. 21 represents type Cabo Cruz sp. nov., [H. A.] PILSBRY Nautilus 57 1 p. 34.—*C. deani*, the current south tip of Abaco, Bahamas, p. 59 pl. vii f. 7; *C. pauli* Stewart Manor Hill, Exuma (main island), Bahamas, p. 60 pl. vii f. 8, spp. nov., M. SMITH Nautilus Philad. 57 2 1943.

*Coelocentrum (Ptychocentrum) bourgeoisae* sp. nov. Teapatarn Chiapas, Mexico, P. BARTSCH Nautilus Philad. 56 3 1943 p. 91 pl. vii f. 8, 9.—*C. (P.) marianum* nom. nov. for *C. (P.) bourgeoisae* Bartsch (Naut. 56 p. 91), P. BARTSCH Nautilus Philad. 56 4 1943 p. 144.

*Coelostemma antricola* Las Greetas, Cacahuamilpa, Guerrero p. 58 fig. 5; *C. presidioensis* Presidio, Veracruz, p. 58 fig. 2, spp. nov., P. BARTSCH J. Wash. Acad. Sci. 33 2 1943.

*Drymaeus<sup>1</sup> bourgeoisae* near Paraje Nuevo, near Córdoba, Vera Cruz, Mexico, on a mulato tree (*Elaphrium simaruba*), p. 28 pl. vi f. 10; *D. perductorum* near Las Grutas de Cacahuamilpa, Guerrero, p. 29 pl. vi f. 6-9, spp. nov. Mexico, H. A. REHDER Nautilus 57 1 1943.—*D. inca* sp. nov. 1,100 metres, Department of Junin, Province of Jango, Peru, M. SMITH Nautilus Philad. 57 2 1943 p. 61 pl. vii f. 10.

*Haplocion guaymasensis* near beach at Guaymas, Sonora, p. 56 fig. 1; *H. mazatlanica* Mazatlan p. 56 fig. 6; *H. campoi* Las Grutas, Cacahuamilpa, Guerrero p. 56 fig. 7, spp. nov. Mexico, P. BARTSCH J. Wash. Acad. Sci. 33 2 1943.

*Ptychocentrum* subgen. nov. type *Coelocentrum (P.) bourgeoisae* sp. nov. [q.v.], P. BARTSCH Nautilus Philad. 56 3 1943 p. 91.

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*Ashfordia granulata* from Glasnevin Botanical Gardens, Co. Dublin, R. COMFORT 88.

*Austrochloritis nundinalis* Nundle p. 64; *A. ascensa* Barrington Tops p. 64, spp. nov., New South Wales, T. IREDALE Aust. Nat. Sydney 11 3 1943.

*Bellacepolis* subgen. nov. for *Cepolis squamosa* (Férussac), H. B. BAKER Nautilus Philad. 56 3 1943 p. 86 pl. x f. 9-13.

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†*Helix* (*Otala*) *marmorata* Fér., *dawesi* var. nov. p. 426 pl. v f. 1-3; *H.* (*Hemicycla*) sp. nov. p. 428 pl. v f. 8-13; from pocket of soft sand, North Front Scree, Gibraltar (Pleistocene), C. T. TRECHMANN Ann. Mag. Nat. Hist. (11) 10 1943.

*Helminthoglypta nickliniana* (Lea), epiphragm and fecal deposition, W. M. INGRAM 170.

*Humboldtiana fortis* Pils., E. J. KOESTNER & R. A. SCHNEIDER 195.

*Levicepolis* subgen. nov. for *Cepolis boriquenae* H. B. B., H. B. BAKER

*Nautilus* Philad. 56 3 1943 p. 88 pl. ix f. 6.

*Mesodon exoletus* Binney, abnormalities, W. H. FLUCK 130

*Mohavelix* subgen. nov. of *Sonorella*, type *Micrarionta* (*Eremarionta*) *micrometalleus* Berry 1930, S. S. BERRY Trans. San Diego Soc. nat. Hist. 10 1 1943 p. 6 pl. i f. 1-3 text-figs 1, 2.

*Neveritis interna* sp. nov. Collarenebri, New South Wales, T. IREDALE Aust. Nat. Sydney 11 3 1943 p. 65.

†*Oreohelix strigosa iowensis* Pils. from the Loess of Copperas Creek, Illinois, J. P. E. MORRISON 247.

*Papuina gartneriana* Pfr., locality and literature relative thereto, W. S. CLENCH 81.

*Polymita picta*, H. B. BAKER 22.

*Pomacea paludosa*, a sinistral specimen from St. Petersburg, Florida, D. L. EMERY 112.

*Sonorelix* gen. nov., type *Micrarionta* (*Eremarionta*) *borregoensis* Berry 1929, S. S. BERRY Trans. San Diego Soc. nat. Hist. 10 1 1943 pp. 8, 9 pl. i f. 4-6 text-fig. 3.

*Sonorelix borregoensis* (Berry); *S. b. ora* (Willett); *S. rixfordi* (Pils.); *S. avaivatza* (Berry), anatomical figs., S. S. BERRY.

†*Straparolus triliris* sp. nov. Pitkin formation, Arkansas, W. H. EASTON J. Paleont. Menasha, Wis. 17 2 1943 p. 151 pl. xxiv f. 20, 21.

## STREPTAXACEA.

*Gibbus* [?], *madgei* nom. nov. designated as type of species figured by Connolly (1925 p. 258 f. 1), A. S. KENNARD Mauritius Inst. Bull. 2 3 1943 p. 120.

*Montedelos* gen. nov. [non des.] Paryphantidae for "*Saladelos*" *orcadis* sp. nov. Barrington Tops, T. IREDALE Aust. Nat. Sydney 11 3 1943 p. 68.

*Saladelos dulcis* sp. nov. Port Macquarie, T. IREDALE Aust. Nat. Sydney 11 3 1943 p. 67.

*Strangesta alpica* Barrington Tops; *S. revera* Leura, Blue Mts., spp. nov., New South Wales, T. IREDALE Aust. Nat. Sydney 11 3 1943 p. 68.

## Scaphopoda.

## DENTALIACEA.

†*Dentalium* (*Fissidentalium*) *gracili-costatum* sp. nov. Central Cliff, Victoria, Eocene, F. A. SINGLETON Proc. roy. Soc. Vict. N.S. 55 2 1943 p. 273 pl. xii f. 6a, b; pl. xiii f. 9a, b.—†*D. glabrum* Geinitz, *alternans* Müller, M. AVNIMELECH 14.—†*D. (Fissidentalium) esmeraldum* Upper Oligocene, Esmeraldas formation, Pantafora, Prov. of Esmeraldas, Ecuador p. 80 (232) pl. vi f. 1, 2, 10; *D. (F.) buricum* Tuffaceous Shales, W. side of Barica Peninsula, Costa Rica p. 81 (233) pl. vi f. 3-6, 9, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.

## Pelecypoda or Lamellibranchia.

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## PROTOBRANCHIATA.

## NUCULACEA.

†*Acila isthmica burica* subsp. nov. Quebrada Peñitas, Costa Rica, Burica Peninsula, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 25 (177) pl. i f. 2, 6, 8, 9.—†*A. (Truncacila) princeps* sp. nov. Nureno formation, Upper Cretaceous, Charleston School Quad., California, H. G. SCHENCK J. Paleont. Menasha, Wis. 17 1 1943 p. 63 pl. viii f. 1-4, 6-8.

*Nucula tamatavica* nom. nov. for *Nucula rugosa* Odhner 1919, not *N. r.* Buckland 1875 nor Conti 1865, N. H. ODHNER J. Paleont. Menasha, Wis. 17 2 1943 pp. 206-207.

†*Nucula* (*Ennucula*) *birchi* sp. nov. = *Nucula* (*Ennucula*) np. sp. Schenck & Keen 1940, Calif. Foss. for Field Geologist p. 10 pl. iv f. 6-7, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 36, 41, pl. iii f. 9-12.—†*N. tiulegenica* sp. nov. cretaceous Emba region, J. P. NIKITINA C.R. Acad. Sci. Moscow N.S. 32 4 1941 p. 273.—†*N. iphigenia azulensis* subsp. nov. Charco Azul, Burica Peninsula, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 24 (176) pl. iv f. 2, 5, 7.

†*Nuculana pseudomariae* sp. nov. Cretaceous Emba region, J. P. NIKI-

TINA C.R. Acad. Sci. Moscow N.S. 32 4 1941 p. 273.—†*N. angulatostrata albensis* var. nov. Cretaceous Emba region, J. P. NIKITINA C.R. Acad. Sci. Moscow N.S. 32 4 1941 p. 273.—†*N. (Jupiteria) chiriquiana* sp. nov. p. 27 (179) pl. i f. 7; *N. (J.) davidana* p. 28 (180) pl. i f. 3 Tertiary, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942.—†*N. paucigradata* coastal cliffs 2½ miles S.E. of Princetown, Victoria, Eocene, F. A. SINGLETON Proc. roy. Soc. Vict. N.S. 55 2 1943 p. 268 pl. xii f. 1a, b.

*Portlandia arctica* in E. and W. Greenland, H. MADSEN 225.

†*Solemya* (*Acharax*) *burica* sp. nov. Burica Sandstone, Burica Point, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 23 (175) pl. ii f. 1.

†*Yoldia* (*Orthoyoldia*) *quiba* sp. nov. Tertiary, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 26 (178) pl. iii f. 5.

## FILIBRANCHIATA.

## ARCACEA.

†*Anadara* (*Larkinia*) *patricia* (Sow); *A. (L.) waringi* (Maury), figs., Manzanilla Bay, Trinidad, R. RUTSCH 310.

†*Cucullaea* (*Cucullona*) *psephea* sp. nov. Coastal Cliffs, 2½ miles S.E. of Princetown (Eocene), Victoria, F. A. SINGLETON Proc. roy. Soc. Victoria N.S. 55 2 1943 p. 270 pl. xiii f. 7a, b, 8a, b.

†*Arca* (*Scapharca*) *charcoazulensis* sp. nov. Charco Azul, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 29 (181) pl. iii f. 7-8.

†*Limopsis* sp. nov. (?) Eocene, F. A. SINGLETON Proc. roy. Soc. Vict. N.S. 55 2 1943 p. 271 pl. xii f. 2a, b.

†*Whitella nasuta* Cub Run, fig. 2; *W. massanutensis* Passage Creek, fig. 1, spp. nov. Ordovician, Martinsburg formation, Massanutten Mountain, Virginia, M. H. SECRIST & W. R. EVITT, J. Wash. Acad. Sci. 33 12 1943 p. 365.

## MYTILACEA.

†*Crenella tomyaensis* sp. nov. Miocene, Nanakita beds, near Sendai Miyagi-ken, K. M. HATAI & M. NAKA-



MURA Bull. biogeogr. Soc. Tokyo 10 7 1940 (pp. 113-114) fig.—†*C. nomeana* sp. nov. Pliocene, near Nome, Alaska, F. S. MacNEIL J. Paleont. Menasha, Wis. 17 1 1943 p. 88 pl. xiii f. 9.

*Mytilus edulis*, N. F. McMILLAN 224. —*M.* cause of poisoning due to ingestion of *Gonyaulax catenella*, B. CURTIS 98. —*M. californianus* nutrition, metabolism, growth and calcium deposition, D. L. FOX & W. R. COE 132. —*M.* experiments on muscular reaction, I. SINGH 328, 329.

†*Mytilus planus* sp. nov. Raritan Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. Nat. Sci. Philad. 95 1943 p. 23 pl. iv f. 5.

#### PSEUDOLAMELLIBRANCHIATA.

#### PTERIEACEA.

†*Actinopteria sububrichi* sp. nov. Devonian Venezuela, G. D. HARRIS Bull. Amer. Paleont. Ithaca 27 108 1940 p. 72 (340) pl. viii f. 2.

†*Byssonychia bowmani* sp. nov. Ordovician, Martinsburg formation, Passage Creek, Massanutten Mountain, Virginia, M. H. SECRIST & W. R. EVITT J. Wash. Acad. Sci. 33 12 1943 p. 363 f. 4, 5.

†*Inoceramus* variation of Canadian Species, F. H. McLEARN 218.

†*Inoceramus* of the Canadian Cre-taceous, F. H. McLEARN 219.

†*Inoceramus cadottensis altifluminis* var. nov. from talus of the *gastroplites* zone, lower part of Fort St. John formation at mouth of Deep Creek p. 43; *I. athabaskensis* sp. nov. La Biche shale, Athabaska River, 2½ miles below Stony Rapids p. 44; *I. leylandensis* sp. nov. Bighorn Sandstone 1½ miles S.E. of Leyland Sta., Alberta, p. 44; *I. l. bighornensis* var. nov. Bighorn Sandstone as type, p. 44; *I. fragilis prairiensis* var. nov. Bighorn Sandstone, Prairie Creek, Alberta, p. 44; *I. pontoni dolosoniensis* var. nov. Bad Heart Sandstone below mouth of R. Puckwaskaw on Smoky R. Alberta, p. 45; *I. nahwisi goodrichensis* var. nov. Hulcross Creek, Pisa R. Valley, B.C.; *I. n. mobertiensis* var. nov. pre-Dunvegan? formation on Coal Creek, a tributary of Johnson Creek, S. of Peace R. canyon, B.C., p. 46, F. H. McLEARN Canad. Field Nat. 57 2-3 1943.

†*Limoptera tenuis* sp. nov. Devonian Venezuela, G. D. HARRIS Bull. Amer. Paleont. Ithaca 27 108 1940 p. 71 (339) pl. viii f. 1.

†*Pterinea maternate* sp. nov. Ordovician, Martinsburg formation, Passage Creek, Massanutten Mountain, Virginia, M. H. SECRIST & W. R. EVITT J. Wash. Acad. Sci. 33 12 1943 p. 365 f. 15.

#### PECTINACEA.

*Amussium japonicum* figs. in colour, P. A. ROBERT 304.

†*Antiquilima* subgen. nov. of *Lima*, type *Lima antiquata* J. Sowerby, in this subgen. is placed also *cubiferens* Whidborne, pl. xxvii f. 76, 77, L. R. COX Proc. Malac. Soc. London 25 5/6 1943 p. 179.

†*Janupecten subteres* sp. nov. Greensand Valley, Waihemo Survey Dist., Dunroonian (Upper Oligocene), J. MARWICK Trans. Proc. Roy. Soc. N Z. 73 3 1943 p. 182 pl. xxv f. 3, 7.

†*Lima* (*Plagiostoma*) *dundriensis* Bajocian *sanzei* zone, Dundry p. 158 pl. vii f. 5a, b; *L. (P.) dorsetensis* Vesulian *gazantiana* zone of Lowe's Quarry, between Bradford Abbas and Sherborne p. 159 pl. vii f. 6a-c; *L. (P.) bradfordensis* Aalenian, *concara* zone of Bradford Abbas p. 159 pl. ix, f. 10a, b; *L. (P.) tutcheri* Vesulian *schloenbachi* or *zigzag* zone of Broadwindsor p. 159 pl. ix f. 11, 12; *L. (P.) crickleyensis* Aalenian, *murchisonae* zone, Pea Grit, of Crickley Hill p. 163 pl. xiii f. 26a-c; *L. (P.) juniperi* Aalenian, *bradfordensis* zone of Frith Quarry, Juniper Hill, near Stroud p. 163 pl. xiv f. 27a-c; *L. (P.) stamfordensis* Lincolnshire Limestone, Squire's Quarry, Stamford ("lower division" of the formation) p. 164 pl. xiv f. 28-30; *L. (P.) overstonensis* Aalenian, *scissum* or succeeding zone, Northampton Sand (Pendle Beds), of Overstone p. 164 pl. xv f. 31, 32; *L. (P.) whidbornei* Aalenian *scissum* zone, Northampton Ironstone, of Duston p. 165 pl. xv f. 33, 34; *L. (P.) northamptonensis* Aalenian, *scissum* zone, Northampton Ironstone, of Duston p. 165 pl. xvi f. 35-37; *L. (P.) yeovilensis* Yeovilian *moorei* zone of Yeovil Junction p. 165 pl. xvii f. 42, 43; *L. (P.) nettlehamensis* Vesulian, Lincolnshire Limestone, Gastropod Beds equivalent (?) of Nettleham, near Lincoln p. 167 pl. xvii f. 44a, b; *L. (P.)*

*ancasterensis* Lincolnshire Limestone (base of Ancaster Feestone), of Newton and Scott's Quarry, Ancaster, Lines p. 168 pl. xvii f. 45a, b; *L. (P.) chuanoni* Aalenian, *murchisonae* zone Pea Grit, of Crickley Hill, Birdlip Hill p. 169 pl. xix f. 49a, b, 50; *L. (P.) richardsoni* Vesulian, Lincolnshire Limestone (Gastropod Beds equivalent), of Ropsley p. 170 pl. xxi f. 58, 59; *L. (P.) buckmani* Vesulian, *schloenbachii* zone of Broadwindsor p. 174 pl. xxv f. 71a-c; *L. (P.) scobina* Vesulian Bradford Abbas (?) but labelled "Burton Bradstock" p. 174 pl. xxv f. 72a-c; *L. (P.) castertonensis* Aalenian, *scissum* zone, Northampton Ironstone, of Little Casterton p. 174 pl. xxiv f. 67a, b, *L. (P.) stroulensis* Bajocian, *discites* zone, *buckmani* Grit, of Frith Quarry, near Stroud p. 175 pl. xxvii f. 75a, b; **spp. nov.** Upper Lias and Inferior Oolite England, L. R. COX Proc. Malac. Soc. 25 5/6 1943.

*Pecten (Lyropecten) eulyratus* Biscagne Bay (Dade County), Florida p. 110, pl. xiv f. 28; *P. (L.) kallinubilosus* of the region of Saint Marks, Florida, 20 fms. p. 110 pl. xiv f. 30-32; **spp. nov.** Gulf of Mexico, F. M. BAYER Nautilus Philad. 56 4 1943.

*Pecten caurinus* Gould, addition to its range, L. G. HERTLEIN 158.

*Pecten* species, figs. in colour, P. A. ROBERT 304.

†*P[ecten] (Velopecten) yuinensis* Hsu **spp. nov.** [nom. nud.], T.-Y. Hsu & H. H. YAO p. 255 162.

†*Pecten (Entolium) discites* Schothheim, T.-Y. Hsu & H. H. YAO 162.

Pectinacea possible relationship of Paleozoic genera, N. D. NEWELL 253a, b.

†Pectinidae from the Dannevicke subdivision Tertiary, New Zealand, figs., C. A. FLEMING 122.

†*Plicatula howelli* **spp. nov.** Raritan Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. Nat. Sci. Philad. 95 1943 p. 25 pl. iv f. 6.

*Pseudamusium terryi* **spp. nov.** Charco Azul, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 30 (182) pl. ii f. 5-7.

†*Regalilima* subgen. **nov.** of *Lima*, type *Lima oolitica* Lycett, Freestone

series of Nailsworth, L. R. COX Proc. Malac. Soc. London 25 5/6 1943 p. 177 pl. xxix f. 79 text-fig. 80.

### ANOMIACEA.

†*Anomia onslowensis* **spp. nov.** Silverdale, Onslow County, North Carolina, Lower Miocene, H. G. RICHARDS J. Paleont. Menasha, Wis. 17 5 1943 p. 520 pl. lxxxiv f. 10, 11.

†*Placuanomia panamensis* **spp. nov.** Quebrada Rabo de Puerco, Panama, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 31 (183) pl. i f. 1, 4, 5.

### OSTREACEA.

*Ostrea* culture, P. S. GALTISOFF 137. —*O.* culture in Australia, G. HUMPHREY 165. —*O.* at the mouth of the Tagus, A. DE MAGALHÃES 226.

*Sacostrea commercialis* culture the biology, Australia, G. F. HUMPHREY 166

### PELLECYCLOBRANCHIATA.

### UNIONACEA.

*Anodonta cygnea*, experiments in self-fertilization, H. H. BLOOMER 58.

*Aparchyria inspecta* **spp. nov.** Holmes Creek 12 miles N.W. of Darwin, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 192. —*A. hemesa* **spp. nov.** Wenlock Downs, Batavia R., N. Queensland, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 191. —*A. inspecta* **spp. nov.** Holmes Creek, Australia, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 192. — "*A.*," T. IREDALE 175.

†*Carbonicola* and association of *Naiadites*, R. M. MACLENNAN 221.

*Carunculina parva*, hermaphrodite, W. C. TEPE 355.

*Castalia orinocensis* **spp. nov.** Orinoco R. at Maipures U.S., Colombia, J. P. E. MORRISON Nautilus Philad. 57 1 1943 p. 14 pl. v f. 1-4.

*Diplodon flucki* **spp. nov.** Orinoco R., above Munduapo, Venezuela, J. P. E. MORRISON Nautilus Philad. 57 1 1943 p. 14 pl. v f. 5-9.

†*Naiadites* and *Carbonicola* association in carboniferous, R. M. MACLENNAN 271.

†*Netschajewia pallasii* (Vern.), fig., Permian, Taimyr, E. M. LUTKEVICH 213.

*Notopalena* subgen. nov. of *Notopala*, subgenotype *N. essingtonensis* Frauenfeld, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 197.

†*Nippononaia* subgen. nov. of *Unio*, type *U. (N.) ryosekiana* sp. nov. Lower Cretaceous, Japan, K. SUZUKI J. Geol. Soc. Japan 48 575 1941 p. 411 text-figs. p. 412.

P[rotohyridella] n[epeanensis] novata subsp. nov. Upper Bellenger River, North N.S.W., T. IREDALE Aust. Nat. Sydney 11 4 1943 p. 92.

*Pseudocaelatura* gen. nov. for *simplex* Lk. from Amboyna p. 462 Germain. Fauna Malac. Terr. et Fluv. des Iles Mascareignes 1921. [Omission.]

*Quaesithyria wardi* gen. et op. nov. Propehyridellidae *Q. fleckeri* sp. nov. Hodgkinson R., N. Queensland, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 191.

*Rochanaia gutmansii* sp. nov. Nioac River, State of Mato Grosso, Brazil, F. L. DE MORRETES Arg. Inst. Biol. São Paulo 12 1941 p. 75, 76 pl. xxxi f. A-F, xxiii f. G-J.

R[ugoshyria]. d[epressa] lowanna subsp. nov. Dorrigo, north N.S.W., T. IREDALE Aust. Nat. Sydney 11 4 1943 p. 91 f. 1.

†*Unio andradei* sp. nov. Lias? volcanic formation, Lebombo, Mozambique, J. V. L. RENNIE Bol. Serv. Indust. min. Geol. Mocambique 5 1943 p. 19 pl. ii f. 8-12.—†*U. (Nippononaia) eozekiana* sp. nov. Early Cretaceous, Monobegawa series, Komô, Hanouramati, Naka-gun, Tokushima Prefecture, Japan, K. SUZUKI J. Geol. Soc. Japan 48 575 1941 pp. 410, 412 text-figs 1-3.

Unionidae from Brazos R., Milam County, Texas, P. BARTSCH 33.—*U. Wakarusa* Valley, Kansas, D. G. FRANZEN & A. B. LEONARD 134.—*U.*, Spirorbis commensals on fossil species and inferences as to the extinct animal, A. E. TRUEMAN 362.

*Velesunio balonnensis adjunctus* Richmond R.; *V. b. intricatus* Rockhampton, Queensland subsp. nov.. T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 189.

## ASTARTACEA.

†*Astarte nortonensis* sp. nov. Pliocene, near Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha, Wis. 17 1 1943 p. 89 pl. xiv f. 13-15.—†*A. kasakhstanica* sp. nov. Cretaceous Emba region, J. P. NIKITINA C.R. Acad. Sci. Moscou N.S. 32 4 1941 p. 243.

## CARDITACEA.

†*Venericardia densata pendletonensis* Gardner & Bowles; *V. bashiplatq* Gardner & Bowles, figs., p. 188, R. WASEM & L. J. WILBERT 368.

†*Cardita (Cyclocardia) crebricostata nomensis* subsp. nov. p. 90 pl. xiv f. 18; *C. (Cy.) subcrassidens* sp. nov. p. 90 pl. xv f. 1-3, from the Pliocene, near Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha, Wis. 17 1 1943.

†*Condylocardia panamensis* sp. nov. base of Pleistocene, Punta Piedra, Panama, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 34 (186) pl. iii f. 9, 10.

†*Venericardia lillieii* sp. nov. Takapau, New Zealand (Waitotaran) C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 193 pl. xxviii f. 1, 2.

## SPHAERIACEA.

*Australpera* gen. nov. of Sphaeriidae, type *Pisidium etheridgii* Smith, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 196.

*Australpera mena* "nov." sp.? Armidale, T. IREDALE Aust. Nat. Sydney 11 4 1943 p. 95.

†*Carbonicola* of the Taff Valley, L. R. MOORE & A. H. COX 241.

†*Corbicula*? *whitfieldi* nom. nov. [sp. nov.] non *C. annosa* Conrad Whitfield, Geol. Surv., N.J., Pal. 1 p. 26, H. G. RICHARDS Proc. Acad. nat. sci. Philad. 95 1943 p. 20 pl. v f. 2, 10.

*Corbiculina mussoni, permiana, maroubra, esculenta subovalina* "five new described forms here figured." "It would be very difficult to define the differences in a few words, the locality being the best test," T. IREDALE Aust. Nat. Sydney 11 4 1943 p. 93.—*C. m. Narrabri* Namoi R.; *C. semara* Burdekin R., N. Queensland; *C. permiana* Yass N.S. Wales; *C. maroubra* Maroubra, N.S.W.; *C. esculenta* Armidale,

North New South Wales; **spp. nov.** Australia, T. IREDALE Aust. Zool. Sydney 10 2 1948 p. 194.—*C. finkeana* **spp. nov.** R. Finke, Central Australia (*C. subaerigata* Tate Rep. Horn Sci. Exped. Cent. Austr. pt. ii zool. p. 217 Feb., 1896), T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 193.

*Pisidium exilis* var. **nov.** (Stelfox and Favre) in FAVRE, Mustapha Canal, near Alexandria, Rev. Suisse Zool. 50 1943 p. 6 text-figs. 1-3.—*P.*, Revision of the species of the Bourguignat collection in the Museum d'Histoire naturelle de Genève, I. FAVRE 119.—*P.*, Revision of spp. in Bourguignat Collection Mus. Hist. nat. Genève, J. FAVRE 119.—“*Pisidium*” *aegyptiacum* Bourg. is a *Cyrena*, J. FAVRE 119.—*P.*, Yorkshire, E. M. MOREHOUSE 242.—†*P. hibernicum* in The Quaternary France, F. BOURDIER 61.

*Sphaerinova* **gen. nov.** of Sphaeriidae, type *S. macgillivrayi* Smith, T. IREDALE Aust. Zool. Sydney 10 2 1943 p. 195.

*S[phaerinova]. terenda* **spp. nov.** Murrumbidgee R., T. IREDALE Aust. Nat. Sydney 11 4 1943 p. 95.

### ISOCARDIACEA.

†*Calypptogena panamensis* **spp. nov.** Punta Burica, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 33 (185) pl. ii f. 2, 3.

### DREISSENACEA.

†*Dreissensia*, N. M. JOUKOVE 185.

### LUCINACEA.

†*Lucina (Lucinoma) chiripanica* Charco Azul, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 36 (188) pl. iv f. 1, 4.

†*Lucinisca menuda* **spp. nov.** Miocene, Round Mountain Silt, California, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 36, 40 pl. iii f. 15, 16.

†*Platyostoma ventricosum permundum* **var. nov.** Devonian, Venezuela, G. D. HARRIS Bull. Amer. Paleont. Ithaca 27 108 1940 p. 76 (344) pl. viii f. 11, 12 pl. ix f. 1.

†*Thyasira* of the Cretaceous, Western Canada, R. A. C. BROWN 65.

### CHAMACEA.

*Pseudochama inezae* **spp. nov.** from wreck of an old steamship, which rested in about 10 fms. off Carysfort Reef, Florida, F. M. BAYER Nautilus Philad. 56 4 1943 p. 122 pl. xv.

### CARDIACEA.

*Cardium (Cerastoderma) ciliatum brooksi* **subsp. nov.** Pliocene, near Nome, Alaska, F. S. MACNEIL J. Paleont. Menasha, Wis. 17 1 1943 p. 91 pl. xv f. 14.

†*Cardium midyetti* **spp. nov.** Gillette marl pits, Silverdale, North Carolina, Lower Miocene, H. G. RICHARDS J. Paleont. Menasha, Wis. 17 5 1943 p. 521 pl. lxxxiv f. 3, 4.—†*C. (Granocardium) sayri* **spp. nov.** Raritan, Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. nat. Sci. Philad. 95 1943 p. 22, pl. v f. 11.—†*C. (G.) raritanensis* **spp. nov.** Raritan Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. Nat. Sci. Philad. 95 1943 p. 22 pl. v f. 14.

†*Conocardium plinthinatum* **nom. nov.** for *C. ornatum* Cleland, not Winchell & Marcy, Wis. Geol. N.H. Surv. Sci. ser. Bull. 21 1911 p. 108 pl. xxi f. 9, 10, C. C. BRANSON Jour. Paleont. 16 1942 p. 387 pl. lix f. 18 [vide etiam, card 23, C. C. BRANSON 64.] —†*C. eboraceum* Hall, *C. emmetense* Winchell, *C. ennes attenuatum* (Conrad), *C. incarcerationum* Clarke, *C. inceptum* Hall, *C. plinthinatum* Branson, *C. semiplenum* White, *C. reatricosum* Hall (revised descriptions), C. C. BRANSON Ill. Card Catal Wagner Free Inst. Sci. Philad. 1942.—†*C. bifarium* Winchell 1866, revised description, C. C. BRANSON 64.

†*Didacna rudis, catillus, carditoides*, M. M. JOUKOVE 185.

†*Lahillia australica* **spp. nov.** Coastal Cliffs, Eocene, Victoria, 2½ miles S.E. of Princetown, F. A. SINGLETON Proc. roy. Soc. Vict. N.S. 55 2 1943 p. 273 pl. xii f. 3-5.

### VENERACEA.

*Anomalocardia broggi* **spp. nov.** Bayovar, Sechura, North Peru, H. A. PILSBRY & A. OLSSON Nautilus Philad. 56 3 1943 p. 78 pl. viii f. 7.



† *Aphrodina johnsoni* sp. nov. Raritan, Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. Nat. Sci. Philad. 95 1943 p. 24 pl. iv f. 3, 4.

† *Chione* (*Chione*) *vaca* pl. v, f. 7, Rio La Vaca, Quebrada, Melissa; *C.* (*C.*) *araneosa* pl. iii f. 6, Burica Sandstones, Burica Point spp. nov. Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 40 (192).

† *Clementia* (*Compsomyx*) *izakai* (Yokoyama), S. NOMURA 258.

*Cooperella atlantica* sp. nov. dredged off Peanut Island, northern Lake Worth, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 1943 93 3161 p. 187 pl. xix f. 3-4.

† *Cuneus nasutum* figs., C. C. BRANSON 64.

† *Dosinia* (*Raina*) *macroptera* sp. nov. Te Uri Road, Mangaotero, New Zealand (Tongaporutuan Tertiary) C. A. FLEMING Trans. Proc. Roy. Soc., N.Z. 73 3 1943 p. 194 pl. xxviii f. 8, 9.

† *Macrocallista traftoni* sp. nov. Pleistocene, Rabo de Puerco and Rio Guanabanan, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 38 (190) pl. v f. 2, 3.

† *Luciploma* gen. nov. Veneridae, type *L. panamensis* Burica Sandstone, Burica Point, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 5 (157) 39 (191) pl. iii f. 1, 2.

† *Meretrix meretrix ninohensis* subsp. nov. Ninohe District, Manta Province, N.E. Honsyû, Japan, K. M. HATAI Bull. biogeogr. Soc. Tokyo 10 9 1940 (pp. 119-138).

*Nanopitar* subgen. nov. of *Pitar*, type *Pitar* (*Nanopitar*) *pilula* sp. nov. Lake Worth, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 1943 93 3161 p. 188 pl. xix f. 5-10.

*Paphia staminea* Conrad, seasonal gonad changes, D. B. QUAYLE 288.

† *Pitar* (*Lamelliconcha*) *mellisa* Quebrada Mellisa f. 4; *P.* (*L.*) *anona* Rio Guanabonou spp. nov., A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 37 (189) pl. v.

*Tapes decussatus* L., seasonal variation of gonads, H. VILELA 366.

*Venus campechiensis* a var. from near St. Petersburg, Florida, P. BARTSCH 37.

## MACTRACEA.

*Ervilia rostratula* sp. nov. Lake Worth, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 1943 93 3161 p. 189 pl. xix f. 1-2.

† *Spisula iwataensis* sp. nov. Ninohe District, Mutu Province, N.E. Honsyû, Japan, K. M. HATAI Bull. biogeogr. Soc. Tokyo 10 9 1940 (pp. 119-138).

## TELLINACEA.

† *Barytellina tertia* sp. nov. Takapaw, New Zealand, Petane Series, C. A. FLEMING Trans. Proc. Roy. Soc. N.Z. 73 3 1943 p. 194 pl. xxviii f. 3, 4.

† *Macoma* (*Macoploma*) *medioamericana* sp. nov. Pliocene, Quebrada Peñitas, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 44 (196) pl. iv f. 8.

*Panacoma* subgen. nov. of *Macoma* genotype *Macoma* (*P.*) *chiriquiensis* sp. nov. Charco Azul, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 pp. 5 (157), 43 (195) pl. v f. 5-6.

† *Sanguinolaria* (*Sanguinolaria*) *azulensis* Pliocene Charco Azul, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 42 (194) pl. v f. 8.

*Tellina* (*Scissula*) *varilineata* sp. nov. Puerto Buearo, Province of Los Santos, Panama (West Coast) p. 79 pl. viii f. 6; *T.* (*Eurytellina*) *mantaensis* sp. nov. Manta, Ecuador, H. A. PILSBRY & A. OLSSON Nautilus Philad 56 3 1943.—*T. astrolabei*, *coccinea*, *incarnata*, figs. in colour, P. A. ROBERT 304.

† *Tellina* (*Macaliopsis*) *frontera* sp. nov. Quebrada Peñitas, Costa Rica, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 42 (194) pl. iv f. 3-6.—† *T. venezuelensis* sp. nov. Pleistocene, Margarita Island, Venezuela, H. G. RICHARDS J. Paleont. Menasha, Wis. 17 1 1943 p. 121 text-figs 3-5.

† *Tellinopsis* ? *venezuelanus* sp. nov. Devonian Venezuela, G. D. HARRIS Bull. Amer. Paleont. Ithaca 27 108 1940 p. 74 pl. viii f. 5.

† *Temblornia* subgen. nov. of *Bornia*, type *Donax triangulata* Anderson and Martin 1914, A. M. KEEN Trans. San Diego Soc. nat. Hist. 10 2 1943 pp. 36, 38 pl. iii f. 6, 7.

## SOLENACEA.

*Ensis minor megistus* subsp. nov.  
Destin, Okaloosa Co., West Florida,  
H. H. PILSBRY & T. L. MCGINTY  
*Nautilus* 57 1 1943 p. 33 pl. vi f. 12, 13.

*Siliqua radiata* fig. in colour, P. A.  
ROBERT 304.

## MYACEA.

†*Aloidis kannouzanensis* sp. nov.  
Pliocene, Ryoritsu beds, Skinchiku district of Ryoritsu Prefecture Taiwan,  
K. TAN Trans. nat. Hist. Soc. Formosa  
30 200-201 1940 (pp. 205-208) figs.

†*Corbula embensis* sp. nov., *C. striatula sagisensis* var. nov. Cretaceous,  
J. P. NIKITINA C.R. Acad. Sci. Moscou  
N.S. 32 4 1941 p. 273.—†*C. (Varicorbula) granti* sp. nov. Quebrada Peñitas,  
Charco Azul, A. A. OLSSON Bull. Amer. Paleont. Ithaca 27 106 1942 p. 45 (197) pl. 2 f. 8, 9.—†*C. manleyi duplex* var. nov. Raritan Sayreville New Jersey,  
H. G. RICHARDS Proc. Acad. Nat. Sci. Philad. 95 1943 p. 21 pl. 6 f. 6.—†*C. greywaczi* sp. nov. Raritan, Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. Nat. Sci. Philad. 95 1943 p. 22 pl. 4 f. 10.

*Mya arenaria* and shell heaps of the Herring Gull, R. W. DEXTER 104.—†*M. arenaria kitahakuokaensis* subsp. nov. Ninohe District, Mutu Province, N.-E. Honsyū, Japan, K. M. HATAI Bull. biogeogr. Soc. Tokyo 10 9 1940 (pp. 119-138).

†*Myalina* examples of palingenesis, N. D. NEWELL 253a, b.

## ADESMACEA.

*Barnea candida* infested by a Haplosporid parasite, E. GUYÉNOT 146.

†*Martesia cretacea magnatuba* var. nov. Raritan Sayreville, New Jersey, H. G. RICHARDS Proc. Acad. Nat. Sci. Philad. 95 1943 p. 25 pl. 7 f. 1, 2.

*Teredo navalis* in the Black Sea larvae and varying temperature, G. A. BULATOR 67.

## PANDORACEA.

†*Anthracomya* of the Taff Valley, L. R. MOORE & A. H. COX 241.

*Asthenothaerus balesi* sp. nov. Missouri Key, Florida, H. A. REHDER

Proc. U.S. Nat. Mus. Washington 1943  
93 3161 p. 189 pl. 19, f. 13-14.

*Guianadesma* genotype *sinuosum* gen. et sp. nov. of Lyonsiidae from rocks in midstream of the Cuyuni River, opposite Kartabo Point, near junction with Mazaruni River, Essequibo District, British Guiana, J. P. E. MORRISON *Nautilus Philad.* 57 2 1943 p. 49 pl. 8.

†*Thracia kamayasikiensis* sp. nov. Ninohe District, Mutu Province, N.-E. Honsyū, Japan, K. M. HATAI Bull. biogeogr. Soc. Tokyo 10 9 1940 (pp. 119-138) fig.

## POROMYACEA.

†*Cuneamya umbonata* sp. nov. Ordovician, Martinsburg formation, Passage Creek, Massanutten Mountain, Virginia, M. H. SECRIST & W. R. EVITT J. Wash. Acad. Sci. 33 12 1943 p. 363 f. 8.

*Poromya rostrata* sp. nov. dredged in 70 fms. off Delrag Beach, Palm Beach County, Florida, H. A. REHDER Proc. U.S. Nat. Mus. Washington 1943 93 3161 p. 189 pl. xix f. 11-12.

## Cephalopoda.

## TETRABRANCHIATA.

## NAUTILACEA.

†*Aturia rovasendiana* Parona figs., from the Lower Tertiary of Palestine, M. AVNIMELECH 15. 2

†*Aturoidea distans* sp. nov. gritband 30-40 feet above the unconformity between the Jurassic and the Tertiary, Victoria, C. TEICHERT Proc. roy. Soc. Vict. N.S. 55 2 1943 p. 260 pl. xi f. 1-4.

†*Cyrtocerina patella* sp. nov. Upper beds of Whitewater formation, just east of limits of Versailles, Indiana, R. H. FLOWER Ohio J. Sci. 43 2 1943 p. 54 pl. i f. 1, 5, 8.—*C. genotypa C. typica* Billings 1865 Pal. Foss. Geol. Surv. Canada p. 178 Vict. Mem. Mus. Ottawa, R. H. FLOWER 129.

†*Gonicercus hubbardi* sp. nov. from the Chickamauga limestone, N. side of Buckeye Mt. Giles, Co. Virginia, R. H. FLOWER Bull. Amer. Paleont. Ithaca. 28 109 1943 p. 26 pl. iii f. 7.—†*G.* distribution in America, R. H. FLOWER 126.

*Nautilacea* Report on early Paleozoic forms, R. H. FLOWER 128.

*Nautilus pompilius* shells used as inlay of food bowls by Solomon Islands natives, a disappearing craft, R. J. A. W. LEVER 207.—†*N. victorianus* sp. nov. In gritband 30–40 feet above Jurassic-Tertiary unconformity, second point N.-W. of Pebble Point, S.-E. of Princetown, Victoria, C. TEICHERT Proc. roy. Soc. Vict. N.S. 55 2 1943 p. 262 pl. xi f. 5–7.

†*Rayonnoceras malotti* sp. nov. from the Chester formation (Paleozoic), Indiana, R. H. FLOWER Bull. Amer. Paleont. Ithaca 28 109 1943 pp. 9 12 pl. i f. 1 text-fig. 1.

†*Valcouroceras* gen. nov. Nautilodea genotype *V. bovinum* sp. nov. Ordovician Little Monty Bay, New York, R. H. FLOWER Bull. Amer. Paleont. Ithaca 28 109 1943 pp. 37.—†*V. bovinum* p. 45, pl. iv, f. 2, 3, 9–10; *V. obesum* p. 46, pl. iv, f. 5; *V. cyclops* p. 47, pl. ii, f. 4–6, pl. iii, f. 7; pl. v, f. 11–12 spp. nov. (Ordovician) Valcour limestone, Little Monty Bay, Chazy, New York, R. H. FLOWER Bull. Amer. Paleont. Ithaca 28 109 1943.

†*Werneroceras plebiforme* (Hall), description revised, figs. pl. i, f. 3, R. H. FLOWER.

#### DIBRANCHIATA.

#### DECAPODA.

#### SEPIACEA.

*Sepia officinalis jurujubai* var. nov. Jurujuba, H. P. DE OLIVEIRA Bol. Minist. Agric. Rio de Janeiro 10 29 1940 p. 29 text-fig.—*S. officinalis*, H. P. DE OLIVEIRA 267.—*S. (Solitosepia) mestus* Gray, *plangou* Gray (contents of stomach of fish), B. C. COTTON 90—*S. S. THORE* 356.

*Sepioloidea lineolata* Q. & G. (contents of stomachs of fish), B. C. COTTON 90.

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*Loligo brasiliensis*, H. P. DE OLIVEIRA 267.

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*Enoplateuthis galaxias* Berry (contents of stomachs of fish), B. C. COTTON 90.

*Sepioteuthis australis* Q. & G. (contents of stomachs of fish), B. C. COTTON 90.

*Hyaloteuthis pelagicus* (Bosc) in the North Pacific, H. A. REHDER 292.

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#### OCTOPODACEA.

*Eledone cirrosa* fig. in the Solent, E. A. ROBINS 306.

*Macroctopus maorum*, life history and anatomy, W. B. BENHAM 48.

*Octopus pallidus* Hoyle, *cyanea* Gray (contents of stomachs of fish), B. C. COTTON 90.

*Robsonella huttoni* sp. nov. Otago Harbour, New Zealand, W. B. BENHAM Trans. Proc. Roy. Soc. N.Z. 73 1 1943 p. 53 pl. 7 f. 1–7.

#### BELEMNITACEA.

†*Actinocamax* spp. from the Eocene of Greenland, H. H. SWINNERTON 349.

†*Belemnites* of the Volga district, E. V. MILANOVSKY 233.

#### AMMONITACEA.

†*Adrianites* (*Neocrimiles*) *meridionalis* sp. nov. (Peruvian, New S. Wales) = *Goniatites* (*Prolecarietes*) *micromphalus* "Morris" Etheridge jr., pars, TEICHERT & FLETCHER Rec. Aust. Mus. Sydney 21 3 1943 pp. 158–160 161.

†*Adrianitidae*, siphuncle, figs., A. K. MILLER & A. G. UNKLESBAY 234.

†*Agathiceratidae*, siphuncle, figs., A. K. MILLER & A. G. UNKLESBAY 234.

†*Ammonites cordatus*, *A. serratus*, J. SOWERBY, nomenclature, L. F. SPATH 339.

†*Ammonites*. (*P[erimodoceras]*). *damoni* sp. nov. Type to be Damon's original in the British Museum (N.H. No. C. 3305), Weymouth, L. F. SPATH Geol. Mag. London 80 3 1943 p. 117.

*Ammonoidea* a monograph of the Gault species, L. F. SPATH 341, 342.

†*Archoceras angulatum* sp. nov. = *Manticoceras bickense* pars Anniss 1927 p. 496, D. T. DONOVAN Proc. Bristol Nat. Soc. (4) 9 4 1943 p. 377 pl. xiii f. 1–6.



*Archoceras*, Saltern Cove, Devon,  
D. T. DONOVAN 103.

†*Armenoceras subvertebratum* sp. nov.  
Irondequoit limestone (Middle Silurian)  
Gasport, New York, R. H. FLOWER  
Bull. Amer. Paleont. Ithaca 27 105  
1942 p. 8 (130) pl. ii f. 5.

†*Aspidoceras (Euspidoceras) heersumense* sp. nov. Corallian Heersum  
Beds, Heersum Preuss. Geol. Landes-  
anst., W. J. ARKELL Monog. Palaeont.  
Soc. London 94 July 1940 p. 197 pl.  
xlili f. 1 and text-fig. 69, W. J. ARKELL  
Monog. Palaeont. Soc. London 94  
July 1940.

†*Axonoceras angolatum* sp. nov.  
Upper Cretaceous, S.W. of Maria  
Theresa, Angola, O. HAAS Amer. Mus.  
Nov. 1222 1943 p. 9 f. 3, 10-13.

†Bactritidae, siphuncle, figs., A. K.  
MÜLLER & A. G. UNKLESBAY 234.

†*Cardioceras (Cardioceras) wrighti*  
sp. nov. Beckley bed, Oxford Univ.  
Mus. p. 217, pl. xlviii f. 1, 7; *C. (C.)*  
*cautisruffae* sp. nov. Redcliff, nr. Wey-  
mouth in *Trigonia hudsoni* Bed  
(Beeston Grit) p. 219 pl. xlix f. 9a, b,  
W. J. ARKELL Monog. Palaeont. Soc.  
London 95 Sept. 1941.—*C. (Cuneicar-*  
*dioceras) bullingdonense* sp. nov.  
Industrial Schools Quarry, Cowley,  
nr. Oxford, W. J. ARKELL Monog.  
Palaeont. Soc. London 95 Sept. 1941  
p. 230 pl. i f. 3, 6. (*Vide etiam* sub-  
gen.).—†*C. (Maltoniceras) brightoni* p.  
233, pl. lii f. 16-18; *C. (M.) high-*  
*worthense* p. 236 pl. li f. 5-7; spp. nov.  
Corallian Highworth, Wilts., W. J.  
ARKELL Monog. Palaeont. Soc. London  
95 Sept. 1941.—*C. (Cawtoniceras) inter-*  
*calatum* sp. nov. Malton, Yorks. Hull  
Mus. p. 239 text-fig. 84; *C. (Verte-*  
*briceras) copleyense* sp. nov. Cowley,  
Oxford, Geol. Surv. Mus. 47823, p.  
246, pl. liv f. 4a, b; *C. (V.) exaggeratum*  
sp. nov. Beckley, p. 249, pl. liv f. 5a, b  
text-fig. 88 B; *(C.) (V.) dorsale*  
*subdorsale* var. nov. Horspath Road  
Quarry, Cowley, p. 250, pl. liii Corallian,  
W. J. ARKELL Monog. Palaeont. Soc.  
London 95 Sept. 1942 f. 2.

†Cheiloceratidae, siphuncle, figs.,  
A. K. MÜLLER & A. G. UNKLESBAY 234.

†*Cleonicerias subbaylei*, p. 700, text-  
fig. 246; *C. leightonense* p. 701, text-  
fig. 247; spp. nov. Gault, Billington  
Crossing, Leighton Buzzard, L. F.

SPATH Monog. Palaeont. Soc. London  
96 Sept. 1942.

†*Coroniceras bucklandi*, S. SMITH  
337.

†*Cravenoceras subplicatum* in the  
Beamsley Anticline, T. W. JONES 184.

†*Cuneicardioceras* subgen. nov. of  
*Cardioceras*, subgenotype *Cardioceras*  
(*Cun.*) *cuneiforme* sp. nov. Bradley Farm  
Quarry, Cumnor, nr. Oxford, W. J.  
ARKELL Monog. Palaeont. Soc. London,  
95 Sept. 1941 pp. lxxvi, 229 pl. i f. 5, 8.

†Cyclolobidae, siphuncle figs., A. K.  
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*Cyclolobus*, Eastern Greenland Per-  
mian, A. K. MILLER & W. H. FURNISH  
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†*Cyrtorizoceras reimanni* Clinton  
formation, New York p. 21 (143) pl. ii  
f. 1-4; *C. coralophilum* from a bio-  
herm to the Irondequoit limestone at  
Lockport p. 23 (145) pl. i f. 5; *C.*  
*filiferum* Irondequoit limestone Gas-  
port p. 23 (145) pl. i f. 8; spp. nov.  
Middle Silurian, New York, R. H.  
FLOWER Bull. Amer. Palaeont. Ithaca  
27 105 1942.

†*Dawsonoceras senescens* sp. nov.  
Racine dolomite, Middle Silurian of  
Waumatos, Wisconsin, R. H. FLOWER  
Bull. Amer. Paleont. Ithaca 27 105  
1942 p. 19 (141).

†Dimorphoceratidae, siphuncle, figs.,  
A. K. MILLER & A. G. UNKLESBAY  
234.

†*Eoasianites globosus* sp. nov. Pitkin  
formation, Arkansas, W. H. EASTON  
J. Paleont. Menasha Wis. 17 2 1943  
p. 152 pl. xxiv f. 16.

†Gastrioceratidae, siphuncle, figs.,  
A. K. MILLER & A. G. UNKLESBAY 234.

†*Goliathiceras (Pachycardioceras)*  
*rhodesi* sp. nov. Sandy Berkshire Oolite  
Series, Marcham or district, Corallian,  
W. J. ARKELL Monog. Palaeont. Soc.  
London 95 Sept. 1942 p. 253 pl. iv  
f. 4, 5.—†*G. s.l. elegans* sp. nov.  
Corallian Cowley, Oxford Univ. Mus.  
p. 263 pl. lvii f. 5, 6; *G. chamousseti-*  
*forme* sp. nov. Corallian, Kingston  
Bagpuize p. 264 pl. lix f. 3, 4, W. J.  
ARKELL Monog. Palaeont. Soc. London  
97 Oct. 1943.—†*G. (Goliathiceras) gorgon*  
sp. nov. Elsworth Rock, Geol. Surv.  
Mus. No. A.1066, W. J. ARKELL Monog.  
Palaeont. Soc. London 97 Oct. 1943  
p. 256 pl. lix fig. 1, 7, 8, 9.—*G.*



(*Goliathites* [subgen. nov. q.v.]) *titan* sp. nov. Cumnor, Bradley Farm, Corallian, W. J. ARKELL Monog. Palaeont. Soc. London 97 Oct. 1943 p. 257 pl. lvi f. 1, 2; pl. lvii f. 1; pl. lviii f. 5 text-fig. 91a, 91b.—†*G.* (*Goliathites*) *gigas* sp. nov. Corallian, Dry Sandford, Berks, W. J. ARKELL Monog. Palaeont. Soc. London 97 Oct. 1943 p. 261 pl. lviii f. 4a, b, pl. lix f. 5.

†*Goliathites* subgen. nov. of *Goliathites*, s-genotype *Ammonites goliathites* Orb. 1849 p. 519 pls. excv-vi, W. J. ARKELL Monog. Palaeont. Soc. London 97 Oct. 1943 pl. lxxxi.

†Goniatitidae, siphuncle, figs., A. K. MILLER & A. G. UNKLESBAY 234.

†*Hamites tenuicostatus* p. 614 pl. lxxviii f. 2, 3 text-fig. 220; *H. subrotundus* p. 616 pl. lxxviii f. 6-9 text-figs. 221; *H. gardneri* p. 624 pl. lxx f. 3-5 text-fig. 225; *H. praegibbosus* p. 627 eg. os. pl. lxx f. 13-15 text-fig. 227a-f., spp. nov. Gault Folkestone; *H. compressus gracilis* Lower Gault, Folkestone p. 619 pl. lxxviii f. 12; *H. tenuis subacuaris* p. 630; *H. intermedius opalina* p. 633 pl. lxx f. 20; *H. (Stomohamites) charpentieri lineata* var. nov. p. 644 pl. lxxii f. 19 Gault; *H. (Stomohamites) subvirgulatus* sp. nov. Gault, the Waite Nothe, Dorset p. 645 text-fig. 234; *H. (S.) ibex* sp. nov. Cambridge, Greensand p. 646 pl. lxxi f. 14, text-fig. 235; *H. (S.) ptychoceratoides* sp. nov. Cambridge Greensand p. 651 text-fig. 238a-c, L. F. SPATH Monog. Palaeont. Soc. London 95 Sept. 1941.—*H. intermedius distincta* p. 633 pl. lxxi f. 4; vars. nov. Gault, L. F. SPATH Monog. Palaeont. Soc. London 95 Sept. 1941.

†*Harpoceras falciferum* ? (J. Sow.) fig. W. BERNOULLI 51.—†*H. falcifer*, S. SMITH 335.

Hoplitidae of the Gault, L. F. SPATH 341.

†*Involuticeras picachosense* sp. nov. Upper Jurassic, Chihuahua, Mexico, R. W. IMLAY J. Palaeont. Menasha Wis. 17 5 1943 pp. 528, 532 pl. 88 f. 1-4; pl. 89 f. 5.

†*Kionoceras mutabile* Siliceous bands of the Clinton Gasport and Lockport p. 10 (132) pl. i f. 1-4; *K. perlineatum* Irondequoit limestone, Clinton group Gasport p. 11 (133) pl. ii f. 6; spp.

nov. Middle Silurian, New York. R. H. FLOWER Bull. Amer. Paleont. Ithaca 27 105 1942.

†*Korythoceras* S. Buckman "is not a synonym of *Goliathiceras* . . ." p. lxxxi, W. J. ARKELL 12.

†*Kossmatia varicostata* p. 539 pl. xcii f. 1-4, pl. xciii f. 1; *K. kingi* p. 540 pl. xciii f. 2; pl. xciv f. 1-6; *K. Nancheriasensis* p. 541 pl. xciv f. 1, 2, 4; spp. nov. Upper Jurassic, Chihuahua, Mexico, R. W. IMLAY J. Paleont. Menasha Wis. 17 5 1943.

†*Laevaptychus meneghinii* (Zigno) var. *rugosa* Trauth. fig., A. ERNI 113.

†*Lechites communis* sp. nov. Cambridge Greensand, L. F. SPATH Monog. Palaeont. Soc. London 95 Sept. 1941 p. 666 text-fig. 244.

†*Lechitrochoceras clintonense* sp. nov. Irondequoit limestone, Clinton group, Middleport, New York, Middle Silurian, R. H. FLOWER Bull. Amer. Paleont. Ithaca 27 105 1942 p. 25 (147) pl. i f. 7; pl. ii f. 7.

†*Lemuroceras* Spath, Canadian *Deshayesites* now placed in Spath's genus, F. H. MCLEARN 220.

†*Leurocyloceras ringuebergi* sp. nov. Irondequoit limestone, Clinton group Middle Silurian, Lockport, New York, R. H. FLOWER Bull. Amer. Paleont. Ithaca 27 105 1942 p. 10 (132) pl. i f. 9.

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†Medlicottidae, siphuncle, figs., A. K. MILLER & A. G. UNKLESBAY 234.

*Neaspidoceras* Spath (1931 pp. 593 ff.) "genotype now designated" *Aspidoceras tenuispatum* Waagen [sed vide p. 593 t.o.d. *N. wagoense*] W. J. ARKELL Monog. Palaeont. Soc. London 94 July 1940 p. lxxviii.

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Highworth Grit, W. J. ARKELL Monog. Palaeont. Soc. London 94 July 1940 p. 191 text-fig. 67.—*P.* of the jurassic Valencia, J. R. BATALLER 40.

†Perrinitidae siphuncle, figs., A. K. MILLER & A. G. UNKLESBAY 234.

†Pervinquieria cf. *romeri* Haas from the Upper Albian, New Mexico, figs., O. HAAS 148.

†Popanoceratidae, siphuncle, figs., A. K. MILLER & A. G. UNKLESBAY 234.

†Promicroceras *capricornoides*, growth stages, E. D. CARRIE 97.

†Pronoritidae, siphuncle, figs., A. K. MILLER & A. G. UNKLESBAY 234.

†Pseudowaagenia Spath 1931 pp. 620, 621, "genotype now designated" *Am. haynaldi* (Herbick, M. S.) Neumayr [sed vide Spath pl. v 1931 and explanation of pl. xci], W. J. ARKELL Monog. Palaeont. Soc. London 94 July 1940 p. lxxvii.

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†*Seguenzicerias* (*Hildoceratoides*) *lavinianum* new to Algeria, F. EHRLMANN 106.

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†*Solenoceras bembense* sp. nov. Upper Cretaceous, near Bembe, Angola, O. HAAS Amer. Mus. Nov. 1222 1943 p. 11 f. 4, 14.

†*Sonneratia obesa* sp. nov. Gault, Billington Crossing, Leighton Buzzard, L. F. SPATH Monog. Palaeont. Soc. London 96 Sept. 1942 p. 700 text-fig. 245.

†*Subplanites fresnosensis* sp. nov. Upper Jurassic, Chihuahua, Mexico, R. W. IMLAY J. Palaeont. Menasha Wis. 17 5 1943 p. 533 pl. xci f. 1.

†*Subvertebriceras* subgen. nov. of *Cardioceras*, subgenotype *Cardioceras densiplicatum* Boden, W. J. ARKELL Monog. Palaeont. Soc. London 95 Sept. 1941 p. lxxviii.

†Thalassoceratidae, siphuncle, figs., A. K. MILLER & A. G. UNKLESBAY 234.

†*Trimarginites* Roslier *Am[monites] arolicus* Oppel here selected as type in the event of the ejection of *Am. trimarginatus* Oppel p. lxxxiv, W. J. ARKELL 12.

†*Virgatosphinctes adkinsi* pp. 528, 534 pl. lxxxvii f. 1-3; *V. chihuahuensis* p. 534 pl. xci f. 2-5; *V. guadalupensis* p. 533 pl. xc f. 1-6; spp. nov. Upper Jurassic, Chihuahua, Mexico, R. W. IMLAY J. Palaeont. Menasha Wis. 17 5 1943.

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*Coccolens* subgen. nov. of *Habroconus* for *pallidus* sp. nov. Cocos Island H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941 p. 224.

*Monoconulus* subgen. nov. of *Euconulus* for *conoides* sp. nov. Tahiti H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941 p. 214.



# 10. CRUSTACEA

ARRANGED BY

the late W. L. SCLATER, M.A.,

AND

J. P. HARDING, Ph.D.

It is with deep regret that we record that Mr. W. L. Sclater was killed by enemy action on July 4th, 1944. The following Section has been compiled from his MSS.

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## I.—TITLES.

**1.—Opinion 138.** On the method by which the amendment to Article 25 of the International Code adopted at the Budapest Meeting of the International Zoological Congress, relating to the replacement of invalid names should be interpreted. Opinions rendered Internat. Comm. Zool. Nomencl. 2 138 1942 pp. 29–34.

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[Vacant.]

# II. TRILOBITA.

ARRANGED BY

C. J. STUBBLEFIELD, D.Sc., F.R.S.

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*Chariocephalus* Hall 1863 genus discussed and defined p. 4, *Irvingella* (*Irvingellina*) Kobayashi 1938 considered to be synonym p. 2, *Dartonaspis* Miller 1936 also considered synonym p. 4; *C. tenerus* p. 5 pl. i figs. 1-3, *C. bellus* p. 6 pl. i figs. 4-6, *C. bulla* p. 7 pl. i figs. 7-11, *C. teres* p. 7 pl. i figs. 12, 13, *C. affinis* p. 8 pl. i figs. 14-20, *C. agrarius* p. 8 pl. i figs. 21-28, *C. angustatus* p. 9 pl. i figs. 35-40, *C. gracilis* p. 9 pl. i figs. 29-31, *C. montis* p. 10 pl. i figs. 32-34, *C. wichitaensis* p. 10 pl. ii figs. 1-8, *C. ulrichi* p. 11 pl. ii figs. 9-14 U.S.A. (Oklahoma); *C. magnus* p. 11 pl. ii figs. 15-17, pl. xii fig. 13, *C. badgerensis* p. 12 pl. ii figs. 18-20 Canada (Alberta); *C. burlingi* p. 12 pl. ii fig. 21 Canada (B.C.) **spp. n.** Cambrian (Upper), *C. tumifrons* Hall & Whitfield referred to *Irvingella* p. 25, RESSER Smithson. misc. Coll. 103 5 1942.

*Chaunoproetus* recorded from Upper Devonian of Western Australia p. 85, TEICHERT 43.

*Cheilocephalus wichitaensis* p. 35 pl. v fig. 39 U.S.A. (Oklahoma), *C. texanus* p. 35 pl. v figs. 36-38 U.S.A. (Texas), *C. buttsi* p. 36 pl. xi fig. 6 U.S.A. (Penn.) **spp. n.** Cambrian (Upper), RESSER Smithson. misc. Coll. 103 5 1942.

*Cheirurus elongatus* Reed hypostome discussed p. 62, BEGG 15,

*Cholopilus nevadensis* p. 36 pl. vi figs. 1, 2 U.S.A. (Nevada), *C. ? albertensis* p. 37 pl. x fig. 3 Canada (Alberta) spp. n. Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Coignovina* subgen. n. see *Brachymetopus*.

*Conocephalites zenkeri* Billings 1863 referred to *Loganopeltis* gen. n. p. 104, RASETTI J. Paleont. 17 1 1943.

*Conocephalites ? (Arionellus) dorsalis* Hall 1863 referred to *Terranovella* p. 234, RAASCH & LOCHMAN 27.

*Coosella texana* p. 75 pl. xiii figs. 21-24 pl. xiv figs. 2-5 U.S.A. (Texas), *C. brevis* p. 76 pl. xiv figs. 6-9 U.S.A. (Penn.) spp. n. Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Coosia canadensis* p. 73 pl. xiii figs. 18-20, *C. albertensis* p. 73 pl. xiii figs. 25-28 Canada (Alberta), *C. dakotensis* p. 74 pl. xiii figs. 29-31 U.S.A. (Dakota), *C. tridentensis* p. 74 pl. xv figs. 12-17 spp. n., *C. wyomingensis* RESSER 1937 referred to *Margivillia* p. 67 pl. xii figs. 14-20 pl. xiv fig. 1 Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Crepicephalus inceni* sp. n. Cambrian (Upper) U.S.A. (Wis.) p. 231 pl. xxxv figs. 11-16 RAASCH in RAASCH & LOCHMAN, *C. nitida* new generic reference for *Uncuspis nitida* RESSER p. 226, *C. unca* Walcott referred to *Uncuspis* but description amended p. 223 pl. xxxiv figs. 1-5, RAASCH & LOCHMAN J. Paleont. 17 3 1943.

*Cybele (Cybeloides) lowei girvanensis* Reed hypostome described p. 61 pl. ii figs. 2, 2A, BEGG 15.

*Cyphinioides ashfelliensis* Reed p. 447 recorded from Gloucestershire, WHITTARD & SMITH 47.

*Cyphinium* sp. p. 446 recorded from Gloucestershire, WHITTARD & SMITH 47.

*Cyrtoproetus* subgen. n. see *Cyrtosymbole*.

*Cyrtosymbole (Cyrtoproetus)* subgen. n. for type *Phillipsia cracoensis* Reed 1899 Carboniferous Britain p. 63, REED Ann. Mag. nat. Hist. [11] 10 1943.

*Cyrtosymbole* recorded from Upper Devonian of Western Australia p. 85, TRICHERT 43.

*Dartonaspis* Miller 1036 considered as synonym of *Chariocephalus* Hall 1863 p. 2, RESSER 36.

*Dikellocephalus (Pterocephalus) bilobatus* Hall & Whitfield 1877 referred to *Pterocephalina* RESSER p. 77 pl. xiv figs. 39-43, RESSER Smithsonian. misc. Coll. 103 5 1942.

Dakimocephalinae, a sub-family of Solenopleuridae according to Kobayashi, excluded from Solenopleuridae except for genus *Acrocephalites* and remained as a new family Burnetidae p. 79, RESSER Smithsonian. misc. Coll. 103 5 1942.

*Dakimocephalus* referred to Burnetidae fam. n. p. 79, RESSER Smithsonian. misc. Coll. 103 5 1942.

*Diplapatokephalus levisensis* sp. n. Ordovician (Lower) Canada (Quebec) p. 102 pl. xix figs. 7-10, RASETTI J. Paleont. 17 1 1943.

*Drevernannia* recorded from Upper Devonian of Western Australia p. 85, TRICHERT 43.

*Drumaspis* gen. n. (Komaspidae) for type *D. walcottii* sp. n. Cambrian U.S.A. (Idaho) p. 28 pl. iv figs. 37-41, *D. idahoensis* p. 29 pl. iv figs. 32-36, *D. macneilli* p. 31 pl. v figs. 12, 13, *D. utahensis* p. 34, pl. v figs. 31-33 U.S.A. (Idaho); *D. alberta* p. 29 pl. v figs. 1-3 Canada (Alberta); *D. briscoensis* p. 30 pl. v figs. 4-8, *D. goodsirensis* p. 30 pl. v fig. 9, *D. sabinensis* p. 31 pl. v figs. 10, 11 Canada (Brit. Columbia), *D. deckeri* p. 31 pl. v figs. 14-16, *D. wichitensis* p. 33 pl. v figs. 21, 22, *D. clara* p. 32 pl. v figs. 23-26, *D. nitida* p. 34 pl. v figs. 34, 35 U.S.A. (Oklahoma), *D. onella* p. 32 pl. v figs. 17-20, *D. texana* p. 32 pl. v figs. 27-30 U.S.A. (Texas) spp. n. Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Ekmania borealis* p. 240 pl. xxxvii figs. 3-13, *E. claudensis* p. 241 pl. xxxvii fig. 14, pl. xxxviii figs. 1-5 spp. n. Cambrian (Middle) Newfoundland, HOWELL J. Paleont. 17 3 1943.

*Elkia* referred to Burnetidae fam. n. p. 79, RESSER Smithsonian. misc. Coll. 103 5 1942.

*Ellipsocephaloides* Kobayashi 1935 removed from Illaenuridae to a new but unnamed family, genus discussed p. 62, *E. argutus* p. 63 pl. x figs. 5, 6, *E. briscoensis* p. 63 pl. x fig. 7, *E. carus*

p. 65 pl. xi figs. 7, 8, *E. montis* p. 65 pl. xi figs. 9-11 Canada (B.C.), *E. sawbackensis* p. 64, pl. xi figs. 4, 5, *E. monsenensis* p. 66, pl. xii figs. 4-6, *E. declivis* p. 67 pl. xii figs. 10-13 Canada (Alberta), *E. silvestris* p. 64 pl. xi figs. 1-3, pl. xii fig. 7, *E. nitela* p. 66 pl. xi fig. 13, pl. xii figs. 1-3 U.S.A. (Oklahoma), *E. bearensis* p. 65 pl. xi fig. 12 U.S.A. (Idaho), *E. butleri* p. 66 pl. xi figs. 14, 15 U.S.A. (Colorado) **spp. n.** Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Elvinia montis* p. 94 pl. xviii figs. 1-4 U.S.A. (Wyoming), *E. utahensis* p. 95 pl. xviii figs. 5, 6 U.S.A. (Utah), *E. ruedemanni* p. 95 pl. xviii figs. 7-10 U.S.A. (N.Y.), *E. granulata* p. 96 pl. xviii figs. 11, 12 U.S.A. (Nevada), *E. gregalis* p. 96 pl. xviii figs. 18-23, *E. longa* p. 97 pl. xviii figs. 24-27, *E. vagans* p. 98 pl. xix figs. 6-9, *E. brevifrons* p. 98 pl. xix figs. 10-14 U.S.A. (Oklahoma) **spp. n.**, *E. missouriensis* RESSER 1938 p. 96 pl. xviii figs. 13-17, *E. bridgei* RESSER 1938 p. 97 pl. xviii figs. 28-31, pl. xix figs. 1-5 Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5.

*Encrinurus multisegmentatus girvanensis* REED hypostome described p. 58 pl. ii fig. 4, BEGG 15.

*Enontioura* **gen. n.** for type *E. typicalis* **sp. n.** Cambrian (Upper) U.S.A. (Nevada) p. 43 pl. vi figs. 37, 38, RESSER Smithsonian. misc. Coll. 103 5 1942.

*Glyphaspis atlantica* **sp. n.** Cambrian (Middle) Newfoundland p. 242 pl. xxxviii figs. 6-10, HOWELL J. Paleont. 17 3 1943.

*Griffithides* Portlock discussed and revised generic definition given p. 58, *G. (Paragriffithides)* **subgen. n.** for type *Phillipsia carinata* Salter MS. Woodward p. 60; *G. (Particeps)* **subgen. n.** for type *G. (P.) scoticus* **sp. n.** p. 60 Carboniferous Britain, REED Ann. Mag. nat. Hist. [11] 10 1943.

*Griffithides (Particeps) scoticus* described and figured p. 177 pl. ii figs. 1-5, REED Ann. Mag. nat. Hist. [11] 10 1943.

*Hallaspis* **gen. n.** for type *Amphion ? matutina* Hall 1863 Cambrian (Upper) U.S.A. (Wisconsin and Minnesota) p. 229 pl. xxxiv figs. 14-17; genus contrasted with *Acheilus* Raymond p. 229,

with *Stenochilina* p. 230, RAASCH & LOCHMAN J. Paleont. 17 3 1943.

*Harpes* recorded from Upper Devonian of Western Australia p. 85, TEICHERT 43.

*Hesperaspis* Stoyanow 1936 referred to synonymy of *Arapahoia* Miller 1936 p. 43, RESSER 38.

*Homalonotus viannai valongensis* **var. n.** Devonian? p. 97 text-fig. 2 nos. 5-9, *H. v.* **var. a** p. 95 text-fig. 2 nos. 3-4, *H. mendes-correiai* p. 99 text-fig. 2 nos. 10-12, *H. cf. gigas* p. 97 text-fig. 2 no. 13 Portugal, CARRINGTON DA COSTA Bol. Soc. Geol. Portugal 1 2 1942.

*Iddingsia* referred to Burnetidae **fam. n.** p. 79, *I. nevadensis* p. 85 pl. xvi figs. 15-17, *I. ? quinnensis* p. 88 pl. xvi figs. 39-41 U.S.A. (Nevada), *I. utahensis* p. 85 pl. xvi figs. 18-20 U.S.A. (Utah), *I. missouriensis* p. 86 pl. xvi figs. 21-26, *I. crassimarginata* p. 87 pl. xvi figs. 30-32 U.S.A. (Missouri), *I. bicincta* p. 87 pl. xvi figs. 27-29, *I. alpersensis* p. 88 pl. xvi figs. 33-38, *I. anatina* p. 89 pl. xvii figs. 1, 2, *I. simplicitas* p. 89 pl. xvii figs. 3-9 U.S.A. (Oklahoma) **spp. n.** Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

Illeauridae, genus *Ellipsocephaloides* Kobayashi 1935 removed from this family but unplaced p. 62, RESSER Smithsonian. misc. Coll. 103 5 1942.

*Illeaurus priscus* p. 38 pl. vi figs. 3-7, *I. albertensis* p. 38 pl. vi figs. 8-12 pl. xiv fig. 18 Canada (Alberta), *I. ? sinclairensis* p. 39 pl. vi figs. 13-15 Canada (B.C.) **spp. n.**, *I. elongatus* revised generic reference for *Tsinania elongata* Walcott 1916 p. 40 pl. vi figs. 18, 19 Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Illeaurus giganteus* p. 181 text-fig. 2 in metamorphosed sediments in Portugal, TEIXEIRA, COTELO NEIVA & CERVEIRA 45.

*Illeaurus longicapitatus* REED hypostome described p. 59 pl. ii figs. 1, 1A, BEGG 15.

*Illeaurus latiaxiatus* considered to be limited to the Chaumont Formation (Ordovician, Black River) p. 240, YOUNG 49.

*Irvingella* Ulrich & Resser 1924 discussed p. 13, *I. silvestris* p. 13 pl. ii figs. 22-27, *I. arbutckensis* p. 14 pl. ii figs.

28-33, *I. mesleri* p. 15 pl. ii figs. 34-38, *I. recurva* p. 15 pl. ii figs. 39-41, *I. alia* p. 16 pl. ii figs. 42-47, *I. ardmoresis* p. 18 pl. iii figs. 7-12, *I. alta* p. 19 pl. iii figs. 16-18, *I. deckeri* p. 19 pl. iii figs. 19-27 U.S.A. (Oklahoma); *I. davisensis* p. 16 pl. ii fig. 48 U.S.A. (Missouri); *I. ottertailensis* p. 17 pl. ii fig. 49 Canada (Brit. Columbia), *I. alberta* p. 23 pl. iv figs. 1-3 Canada (Alberta); *I. oblonga* p. 17 pl. iii figs. 1-3, *I. agrestis* p. 17 pl. iii figs. 4-6, *I. plena* p. 18 pl. iii figs. 13-15, *I. burnetensis* p. 20 pl. iii figs. 28-33, *I. bacca* p. 20 pl. iii figs. 34-36, *I. accincta* p. 21, pl. iii figs. 37-39, *I. abrupta* p. 21, pl. iii figs. 40-45, *I. media* p. 22, pl. iii figs. 46-54 U.S.A. (Texas); *I. richmondensis* p. 23 pl. iv figs. 4-6, *I. adamsensis* p. 24 pl. iv figs. 7-11, *I. flohri* p. 24 pl. iv figs. 12-14 U.S.A. (Nevada) spp. n., *I. tumifrons* (Hall & Whitfield) p. 25 pl. iv figs. 42-43 Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Irvingella* (*Irvingellina*) Kobayashi 1938 considered synonym of *Chariocephalus* Hall 1863 p. 5, RESSER 36.

*Kainella orientalis* sp. n. Ordovician (Lower) Canada (Quebec) p. 102 pl. xix figs. 11, 12, RASSETTI J. Paleont. 17 1 1943.

*Kingstonia electra* p. 47 pl. vii figs. 33-36 U.S.A. (Utah), *K. mucro* p. 48 pl. viii figs. 1-8, *K. bosworthensis* p. 48 pl. viii figs. 9-13, *K. robsonensis* p. 49 pl. viii figs. 14, 15 Canada (B.C.), *K. sullivanensis* p. 49 pl. viii figs. 16-19, *K. promissa* p. 49 pl. viii figs. 20-23, *K. vulgata* p. 50 pl. viii figs. 26-30, *K. ? plena* p. 50 pl. viii figs. 31, 32 Canada (Alberta); *K. loperi* p. 50 pl. viii figs. 24, 25 U.S.A. (Colorado), *K. kindlei* p. 51 pl. ix figs. 1-4 U.S.A. (Penn.) spp. n., *K. ara* (Walcott) p. 51 pl. viii figs. 42-46 Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

Komaspidae discussed and re-defined to include *Komaspis* Kobayashi. *Chariocephalus* Hall, *Irvingella* Ulrich & Resser, *Parairvingella* Kobayashi, *Drumaspis* gen. n. p. 2, RESSER 36.

*Komaspidella* Kobayashi 1938, genus discussed and described, and despite Resser's 1942 contrary opinion, its validity is upheld p. 226, *K. thea* (Walcott) p. 227 pl. xxxiv figs. 18-26, *K. seelyi* (Walcott) p. 226, RAASCH & LOCHMAN 27.

*Kootenia longispina* p. 244 pl. xxxix figs. 4-6, *K. cloudensis* p. 245 pl. xxxix figs. 7-9 spp. n. Cambrian (Middle) Newfoundland, HOWELL J. Paleont. 17 3 1943.

*Levisaspis* gen. n. [resembling *Hardyoides*] for type *L. typicalis* sp. n. Ordovician (Lower) Canada (Quebec) p. 101 pl. xix figs. 13-15, RASSETTI J. Paleont. 17 1 1943

Lichidae see *Terataspis*.

*Loganopeltis* gen. n. [resembles *Harpes* and *Entomaspis*] for type, *L. depressa* sp. n. Ordovician (Lower) Canada (Quebec) p. 103 pl. xix figs. 1-3, *L. zenkeri* new generic reference for *Conocephalites* z. Billings 1863 p. 104, RASSETTI J. Paleont. 17 1 1943.

*Lichas* (*Hemiargus*) *maccullochi* Reed, hypostome in position p. 56 pl. ii fig. 6, *L. (Euargus) geikiei* Nicholson & Etheridge hypostome described p. 57, BEGG 15.

*Macelloura transversa* sp. n. Cambrian (Upper) U.S.A. (Texas) p. 43 pl. vii fig. 1, RESSER Smithsonian. misc. Coll. 103 5 1942.

*Maryvillia alberta* p. 70 pl. xiii figs. 1-4 Canada (Alberta), *M. moosensis* p. 72 pl. xiv figs. 15-17 Canada (B.C.), *M. violaensis* p. 68 pl. xii figs. 21-26 U.S.A. (Wyoming), *M. utahensis* p. 68 pl. xii figs. 27-32, *M. marjumensis* p. 69 pl. xii figs. 33-35 U.S.A. (Utah), *M. loperi* p. 70 pl. xii figs. 36-38 U.S.A. (Colorado), *M. montis* p. 71 pl. xiii, figs. 11-13 U.S.A. (S. Dakota), *M. hybrida* p. 71 pl. xiii figs. 14-17 U.S.A. (Texas) spp. n., *M. wyomingensis* new generic reference for *Coosia wyomingensis* Resser 1937 p. 67 pl. xii figs. 14-20 pl. xiv fig. 1 Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Megagraulos ? terranovicus* sp. n. Cambrian (Middle) Newfoundland p. 244 pl. xxxix figs. 2, 3, HOWELL J. Paleont. 17 3 1943.

*Metaphillipsia* gen. n. for type *Asaphus seminiferus* Phillips Carboniferous (Lower) Britain p. 57, REED Ann. Mag. nat. Hist. [11] 10 1943.

*Meteoraspis banffensis* sp. n. Cambrian (Upper) Canada (Alberta) p. 72 pl. xiii figs. 5-10, RESSER Smithsonian. misc. Coll. 103 5 1942.



*Micmacca elongata* p. 87 pl. i fig. 8, *M. transversa* p. 87 pl. i fig. 9 spp. n. Cambrian (Lower) China (Yunnan), LU Bull. Geol. Soc. China 21 1 1941.

*Modocia walcotti* sp. n. for *Crepicephalus unca* Walcott 1916 *partim* Cambrian (Upper) U.S.A. (Wisconsin) p. 233 pl. xxxv figs. 1, 2, LOCHMAN in RAASCH & LOCHMAN J. Paleont. 17 3 1943.

*Niobe* cfr. *insignis* p. 7 pl. i fig. 4, *N. laeviceps* p. 7 pl. i fig. 5 Ordovician (Lower) Sweden (Öland), REGNÉLL 33.

*Ogygia scutatrix* Salter probably a *Niobe* p. 139 pl. vii figs. 1-3, LAKE 25.

*Onchonotus foveolatus* sp. n. Ordovician (Lower) Canada (Quebec) p. 103 pl. xix figs. 4-6, RASETTI J. Paleont. 17 1 1943.

*Palaeolenus tingi* sp. n. Cambrian (Lower) China (Yunnan) p. 83 pl. i figs. 15a, b, *P. douvillei* Mansuy p. 83 pl. i fig. 14, *P. lantenoisi* Mansuy p. 84 pl. i figs. 13a-c, *P. deprati* p. 84 pl. i figs. 12a-c, LU Bull. Geol. Soc. China 21 1 1941.

*Paragraulos* gen. n. for type *P. kunmingensis* sp. n. Cambrian (Lower) China (Yunnan) p. 86 pl. i figs. 7a-b, LU Bull. Geol. Soc. China 21 1 1941.

*Paragriffithides* subgen. n. see *Griffithides*.

*Parairvingella* Kobayashi 1938 discussed p. 25, *P. eurekaensis* p. 26, pl. iv figs. 15-17, *P. intermedia* p. 27 pl. iv figs. 25-31, *P. hamburgensis* p. 27 pl. iv figs. 23, 24 spp. n., *P. angustilimbata* Kobayashi p. 26 pl. iv figs. 18-22 Cambrian (Upper) U.S.A. (Nevada), RESSER Smithsonian. miscell. Coll. 103 5 1942.

*Particeps* subgen. n. see *Griffithides*.

*Perliproetus* recorded from Upper Devonian of Western Australia p. 87, TEICHERT 43.

*Permoproetus* (*Bollandia*) subgen. n. for type *Asaphus globiceps* Phillips Carboniferous (Lower) Britain p. 62, REED Ann. Mag. nat. Hist. [11] 10 1943.

*Phacops* (*Pterygomietopus*) *retardatus* Reed hypostome described p. 60 pl. ii fig. 10, *P. elliptifrons* Sars & Boeck hypostome described p. 61 pl. ii fig. 9, BEGG 15.

*Phacops latifrons* in Devonian of Iran (Persia) p. 29, CLAPP 18.

*Phacops* (s.s.) sp. indet. p. 359 text-figs. 1-3a Middle Devonian Japan, SUGIYAMA & OKANO J. Geol. Soc. Japan 48 574 1941.

*Phacops* (s.s.) Asiatic records listed (all Devonian) p. 359, SUGIYAMA & OKANO 42.

*Phillipsia* discussed and revised generic definition given p. 55, REED 31.

*Phillipsinella parabola* Barrande hypostome in position p. 60 pl. ii fig. 8, BEGG 15.

*Pilekia eryx*, *P. apollo* used as criteria of age of a limestone boulder from which new species are described in the Levis conglomerates p. 104, RASETTI 28.

*Pleasiocomia oehlerti* p. 94 text-fig. 2 no. 1, CARRINGTON DA COSTA 17.

*Platycolpus quinnensis* p. 40 pl. vi figs. 16, 17, *P. highlandensis* p. 41 pl. vi figs. 30, 31 U.S.A. (Nevada), *P. oklahomensis* p. 40 pl. vi figs. 20-25, *P. wichitaensis* p. 41 pl. vi figs. 26-29 U.S.A. (Oklahoma), *P. sinclairensis* p. 42, pl. vi figs. 32-36 Canada (B.C.) spp. n. Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Platylchas crescenticus* Reed, Phleger's work on hypostomes discussed p. 160, BEGG 16.

*Plethometopus albertensis* sp. n. Cambrian (Upper) Canada (Alberta) p. 47 pl. xii fig. 13, RESSER Smithsonian. misc. Coll. 103 5 1942.

*Plomera actinura* p. 9 pl. i fig. 7 text-fig. 1, the relationship of this species of Dalman's with certain Bohemian species referred by Barrande to *Amphion* is taken to indicate communication between Bohemia and Sweden in the Lower Ordovician, REGNÉLL 33.

*Proetus* (*Semiproetus*) subgen. n. for type *P. (S.) twistonensis* sp. n. Carboniferous (Lower) Britain p. 62, REED Ann. Mag. nat. Hist. [11] 10 1943.

*Proetus girvanensis* Nicholson & Etheridge hypostome described p. 57 pl. ii figs. 7, 7a, BEGG 15.

*Pseudoptychoparia reedi* sp. n. Cambrian (Lower) China (Yunnan) p. 87 pl. i figs. 11a, b, *P. yunnanensis* (Mansuy) p. 86 pl. i fig. 10, *Lu Bull. Geol. Soc. China* 21 1 1941.

*Pseudosphaerexochus praecursor* sp. n. Ordovician (Lower) Sweden (Öland) p. 7 pl. i fig. 6, previously this genus has not been recognised in Sweden from strata below the Chasmops Stage, REGNÉL K. fysioogr. Sällsk. Lund Förh. 10 1941.

*Pterocephalina texana* p. 76 pl. xiv figs. 32, 33 U.S.A. (Texas), *P. notha* p. 77 pl. xiv figs. 34-38, *P. pogonipensis* p. 78 pl. xv figs. 1-2, *P. grata* p. 78 pl. xv figs. 3-6 U.S.A. (Nevada), *P. utahensis* p. 79 pl. xv figs. 7-11 U.S.A. (Utah) spp. n., *P. bilobata* new generic reference for *Dikelocephalus* (*Pterocephalus*) b. Hall & Whitfield 1877 p. 77 pl. xiv figs. 39-43 Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Pteroparia* recorded from Upper Devonian of Western Australia p. 85, TEICHERT 43.

*Ptychoparia dorsalis* Vogdes 1911 referred to *Terranovella* p. 234, RAASCH & LOCHMAN 27.

*Ptychoparia zenkeri* (Billings) referred to *Loganopeltis* gen. n. p. 104, RASETTI J. Paleont. 17 1 1943.

*Redlichia pustulosa* p. 78 pl. i fig. 5, *R. mai* p. 80 pl. i figs. 2a-b spp. n., *R. carinata* Mansuy p. 79 pl. i fig. 3, *R. walcotti* Mansuy p. 79 pl. i figs. 1a, b, *R. chinensis* Walcott p. 81 pl. i fig. 4, *R. sp.* p. 82 pl. i fig. 6 Cambrian (Lower) China (Yunnan), *Lu Bull. Geol. Soc. China* 21 1 1941.

*Scutellum* recorded from Upper Devonian of Western Australia p. 85, TEICHERT 43.

*Semiproetus* subgen. n. see *Proetus*.

*Solenoparia* ? *newfoundlandensis* sp. n. Cambrian (Middle) Newfoundland p. 242 pl. xxxix fig. 1, HOWELL J. Paleont. 17 3 1943.

*Solenopleura proavita* sp. n. Cambrian (Middle) Newfoundland p. 243 pl. xxxviii figs. 12-17, HOWELL J. Paleont. 17 3 1943.

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Solenopleuridae (Dokicephalinae) see Dokicephalinae.

*Sphaerocoryphe thomsoni* Reed hypostome discussed p. 62, BEGG 15.

*Stenochilina matutina* Resser 1936 referred to *Hallaspis* gen. n. p. 229, RAASCH & LOCHMAN 27.

*Stenopilus* Raymond 1924 genus discussed and considered to have developed from a *Kingstonia* p. 59, *S. bacca* p. 59 pl. x figs. 8-13, *S. aduncus* p. 60 pl. x figs. 14-17 spp. n. Cambrian (Upper) U.S.A. (Oklahoma), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Stygina latifrons* (Portlock) hypostome in position p. 58 pl. ii fig. 5, BEGG 15.

*Symphysurus* ? *kuoi* sp. nondescr. p. 262, SHENG in *Kuo Bull. Geol. Soc. China* 21 2-4 1941.

*Taenicephalus pealei* p. 99 pl. xix figs. 15-23, *T. castlensis* p. 106 pl. xxi figs. 24, 25 U.S.A. (Montana), *T. holmesi* p. 100 pl. xix figs. 24-27, *T. speciosus* p. 100 pl. xx fig. 19, *T. wyomingensis* p. 106 pl. xxi fig. 32 U.S.A. (Wyoming), *T. libertyensis* p. 101 pl. xix figs. 28-32, *T. granulatus* p. 101 pl. xx figs. 4-7, *T. maladensis* p. 102 p. xx figs. 8-10 U.S.A. (Idaho), *T. ornatus* p. 102 pl. xx figs. 11, 12, *T. striatifrons* p. 103 pl. xxi figs. 1-3, *T. utahensis* p. 103 pl. xxi figs. 4-6, *T. hyrumensis* p. 104 pl. xx figs. 13-18, *T. modestus* p. 104 pl. xxi fig. 7 U.S.A. (Utah), *T. texanus* p. 104 pl. xxi figs. 8-12 U.S.A. (Texas), *T. wichitaensis* p. 105 pl. xxi figs. 13-17 U.S.A. (Oklahoma), *T. quinnensis* p. 105 pl. xxi figs. 18-23 U.S.A. (Nevada) spp. n., *T. cordillerensis* Miller 1936 p. 101 pl. xix fig. 33 Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Taihungshania omeishanensis* *liui*, var. nondescr. p. 262, *T. brevicata*, *T. mequeli* (sic), SHENG in *Kuo Bull. Geol. Soc. China* 21 2-4 1941.

*Talbotina candida* p. 107 pl. xxi figs. 27, 28, *T. ulrichi* p. 107 pl. xxi fig. 26 U.S.A. (Texas), *T. caelata* p. 107 pl. x fig. 4 U.S.A. (Tennessee) spp. n. Cambrian (Upper), RESSER Smithsonian. misc. Coll. 103 5 1942.

*Terataspis* new restoration 20 inches long, by I. G. Reimann, modelled by Paul Marchand, based on in formation recently acquired from

a specimen 13 inches long from Devonian (Onondaga) of Fogelsanger Quarry, Williamsville, Buffalo, N.Y., placed in Buffalo Museum of Science. Improves the 1940 restoration by better knowledge of rear margin of cephalon and presence of thoracic pleural spines, p. 75 4 text-figs., REIMANN 35, p. 153 text-fig., ANON. 14.

*Terranovella dorsalis* new generic reference for *Conocephalites*? (*Arionellus*) *dorsalis* Hall 1863 p. 234 pl. xxxv figs. 3-10, 17, RAASCH & LOCHMAN 27.

*Tsinania elongata* Walcott 1916 referred to *Iliaenurus* p. 40 pl. vi figs. 18, 19, RESSER 36.

*Ucekia* Walcott 1924 considered synonym of *Kingstonia* Walcott 1924 p. 51, RESSER 36.

*Uncaspis* Kobayashi 1935 genus discussed and emended, described p. 221, concept of genotype species restricted p. 223, *U. limbata* sp. n. Cambrian (Upper) U.S.A. (Wisconsin) p. 224 pl. xxxiv figs. 6-13 RAASCH in RAASCH & LOCHMAN, *U. unca* (Walcott 1916 *partim*) p. 223 pl. xxxiv figs. 1-5, *U. angustata* Resser p. 225, *U. micans* Resser p. 225; *U. nitida* Resser referred to *Crepicephalus* p. 226; *U. tennesseensis* Resser *partim* referred to *Coosella* p. 226, RAASCH & LOCHMAN J. Paleont. 17 3 1943.

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# 12. ARACHNIDA

TO WHICH ARE ADDED

MEROSTOMATA, PANTOPODA, TARDIGRADA, PENTASTOMIDA,  
MYRIOPODA, AND PROTOTRACHEATA.

ARRANGED BY

E. BROWNING.

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# 13. INSECTA

BY

THE IMPERIAL INSTITUTE OF ENTOMOLOGY

## FOREWORD

THE attention of readers is directed to the fact that, beginning with Vol. 74 (1937), the systematic part of the Record is reserved only for information of purely taxonomic value. References to data on morphology, physiology, bionomics, ecology, distribution and other general problems must be looked for in the Subject Index, where they are arranged by orders under each heading. The classification of headings in the Subject Index has been revised in order to make the information more complete and readily available. It is hoped that this change will render the Record of more value for entomologists working on general problems, without affecting its importance for taxonomists.

Entomological papers written entirely from an economic point of view are omitted, but abstracts of these will be found in the *Review of Applied Entomology*.

Very brief papers, usually those dealing with a single species, are noticed either in the Subject Index or in the systematic part, but do not appear in the list of titles.

The writers of systematic papers are requested to mark new synonyms with the words (*n. syn.*), as otherwise it is impossible to ensure that they will be correctly recorded.

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## I.—TITLES.

1 — Opinions and Declarations rendered by the International Commission on Zoological Nomenclature. London, 41, Queen's Gate, S.W.7. Vols. 1 and 2 1942 and 1943. **Opinion No. 139**—On the method by which the Amendment to Article 25 of the International Code adopted at the Budapest Meeting of the International Zoological Congress, relating to the replacement of invalid names, should be interpreted. **No. 139**—The names *Cephus* Latreille, [1802–1803], and *Astata* Latreille, 1796, in the Hymenoptera added to the official list of generic names. **No. 140**—On the method of forming the family names for *Merops* Linnaeus, 1758 (Aves) and for *Merope* Newman, 1838 (Insecta). **No. 141**—On the principles to be observed in interpreting Article 4 of the International Code relating to the naming of families and subfamilies. **No. 142**—Suspension of the rules for *Satyrus* Latreille, 1810 (Insecta, Lepidoptera). **No. 143**—On the method of forming the family name for *Tingis* Fabricius, 1803 (Insecta, Hemiptera). **No. 144**—On the status of the names *Crabro* Geoffroy, 1762, *Crabro* Fabricius, 1775, and *Cimbex* Olivier, 1790 (Insecta, Hymenoptera). **No. 145**—On the status of names first published in works rejected for nomenclatorial purposes and subsequently published in other works. **No. 146**—Suspension of the rules for *Colias* Fabricius, 1807 (Insecta, Lepidoptera). **No. 147**—On the principles to be observed in interpreting Article 34 of the International Code in relation to the rejection, as homonyms, of generic and subgeneric names of the same origin and meaning as names previously published. **No. 148**—On the principles to be observed in interpreting Articles 25 and 34 of the International Code in relation to the availability of generic names proposed as emendations of, or as substitutes for, earlier generic names of the same origin and meaning. **No. 149**—Twenty-one names in the Orthoptera (Insecta) added to the official list of generic names in Zoology. **No.**

**150**—On the dates of publication of the several portions of Hübner (J.), Verzeichniss bekannter Schmettlinge [sic], 1816–[1826].

**Declaration No. 1**—Code of ethics to be observed in the renaming of homonyms. **No. 2**—On the importance of avoiding the issue of authors' reprints or separata in advance of the publication of the work or journal in which the paper in question is to be published. **No. 3**—On the importance of giving a clear indication of the date of issue of every zoological publication. **No. 4**—On the need for avoiding intemperate language in discussions on zoological nomenclature. **No. 5**—On the grant to the International Commission on Zoological Nomenclature of plenary powers to suspend the rules in certain cases. **No. 6**—On the need for new names to be clearly indicated as such on their first publication and on the need for avoiding the publication of names as new on more than one occasion. **No. 7**—On the need for quoting bibliographical or other references for all names cited in zoological works. **No. 8**—On the need for giving in the case of zoological journals a clear indication of the date of publication of each number or part.

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## SOUTH EUROPE.

**Insecta :** NOBRE & BRAGA, *Berlengas and Farilhões Is.*, Portugal, 1006; DE SEABRA, *Portuguese forests*, additions, 1241.

**Coleoptera :** GOMES ALVES, *Cicindelids*, Portugal, catalogue, 570; NEVES, Portugal, 993; DE SEABRA, *Cicindela*, Portugal, list, 1244; Portugal, catalogue, additions, 1245.

**Hymenoptera :** GINER MARÍ, *Bembex, Ammoplanus* (Spheg.), Spain, revision, 557, 558; DEL JUNCO Y REYES, *Pompilidae*, Spain, 749.

**Diptera :** HERING, *Agromyzidae*, Spain, 657.

**Hemiptera :** GÓMEZ-MENOR, *Aleurodidae*, Spain, revision, 572; PELAEZ, *Apterola* (Lygaeid.), Spain, revision, 1074; DE SEABRA, *Heteroptera*, *Cicadoidea*, *Fulgoroidea* and *Coccidae*, Portugal, catalogues, 1243.

**Odonata :** DE SEABRA, Portugal, catalogue, 1243.

**Dermoptera :** DE SEABRA, Portugal, catalogue, 1243.

**Orthoptera :** MORALES AGACINO, *Odontura* (Tettigon.), Iberian Penin., revision, 972; DE SEABRA, Portugal, catalogue, 1243.

## NORTH AFRICA.

**Insecta :** RUNGS, N.W. Sahara, 1187.

**Coleoptera :** ANTOINE, *Cymindis* (Carab.), *Adephaga*, *Litoborinae*

(Tenebr.), *Pachychila* (Tenebr.), key, Morocco, 32; DE LA ESCALERA, *Eurycaulus* (Tenebr.), Ifni and Spanish Sahara, revision, 441; ESPAÑOL COLL, *Tenebrionidae*, Ifni and Spanish Sahara, 443; PAULIAN & VILLIERS, *Scarabaeids*, 1069; DE PEYERIMHOFF, Sahara, new spp., 1091.

**Hymenoptera :** HONORÉ, *Sphegids*, Egypt, revision, 681; SANTSCHI, *Formicids*, Africa minor, 1212.

**Lepidoptera :** LUCAS, *Heterocera*, Morocco, 883; POWELL & RUNGS, Morocco, additions, 1115; RUNGS, Moroccan Sahara, 1183.

**Diptera :** HARANT & GALAN, *Forcipomyia* sp. n. (Ceratopog.), Hoggar, 614; PARROT, *Phlebotomus* (Psych.), Sahara, 1047, 1048, 1049; WEYER, *Anopheles* (Culic.), illustrated key, 1453.

**Hemiptera :** MIMÉUR, *Aphids*, Morocco, 951; RIBAUT, Moroccan Haut Atlas, 1152; RUNGS, *Coccids*, Tibesti, 1189.

**Dermoptera :** CHOPARD, Haut Atlas, 275.

**Orthoptera :** CHOPARD, Haut Atlas, 275; HUSSEIN, *Acrididae*, Egypt, revision, 716; UVAROV, *Sphodromerus* (Acrid.), revision, 1410; Siwa Oases, 1411.

**Thysanura :** SILVESTRI, Haut Atlas, 1274.

## AFRICA.

**Coleoptera :** BALFOUR - BROWNE, *Apioninae* (Curc.), Jebel Murra, Anglo-Egyptian Sudan, 63; BECK, *Dynastinae*, Angola, 89; BRYANT, *Zeugophora* (Orsodac.), list, key, 204; *Sphaeroderma* (Haltic.), list, 206; *Cryptocephalus*, list, 209; MARSHALL, *Embrithini* (multistriate), revision, 923.

**Hymenoptera :** NIXON, *Meteorus* (Brac.), revision, 1000; *Microphanurus* (Scelion.), 1001.

**Lepidoptera :** TALBOT, *Anapleis*, *Belenois* (Pier.), revision, 1346; *Dixeia* (Pier.), list, 1350.

**Diptera :** DE MEILLON, *Simuliidae*, *Ceratopogonidae*, Lourenço Marques,

394; VAN EMDEN, Phaoninae (*Phaonia* group) (Musc.), keys, 436; GLASGOW & MACINNES, *Anopheles* (Culic.), Br. Somaliland, 561; LEWIS, Culicines, Eritrea, 852; REBÊLO & DE CARVALHO PEREIRA, Culicines, Moçambique, 1138; VAN SOMEREN, mosquitos, Br. Somaliland, 1298.

**Hemiptera:** POISSON, *Microvelia*, revision, 1103.

**Dermaptera:** HINCKS, Chyulu Hills, Kenya, 668.

**Orthoptera:** EBNER, Saltatoria, Fernando Po I., 429; REHN, *Ornithacris* (Acrid.), revision, 1146; UVAROV, *Catantops*, revision of *axillaris* group (Acrid.), 1405; *Abisares* (Acrid.), revision, 1407; *Oxyrrhepes* group (Acrid.), revision, 1408; *Mesopsis* (Acrid.), revision, 1409.

#### MADAGASCAR AND MASCARENE ISLANDS.

Collectively. **Hemiptera:** MAMET, Coccoidea, list, 917.

#### COMORO IS.

**Lepidoptera:** TALBOT, *Appias sabina* subsp. n. (Pier.), 1347.

#### MADAGASCAR.

**Hymenoptera:** NIXON, *Spathius* spp. n. (Brac.), 1005.

**Lepidoptera:** CORBET, *Euploea* (Danaid.), key, 328; TALBOT, *Anapheis creona* subsp. n. (Pier.), 1346.

**Diptera:** DE MEILLON, *Anopheles* sp. n. (Culic.), 395.

**Hemiptera:** DRAKE, *Epimixa* sp. n. (Tingid.), 422.

#### MAURITIUS.

**Coleoptera:** VINSON, Scaphidiidae, revision, 1429.

**Hemiptera:** MAMET, new Coccids, 916; Aphidae, additions and revised keys, 918.

#### SEYCHELLES.

**Coleoptera:** DARLINGTON, Carabidae, 371.

**Lepidoptera:** CORBET, *Euploea* (Danaid.), key, 328.

#### CAUCASUS, WEST AND CENTRAL ASIA.

**Coleoptera:** PLAVIL'SHCHIKOV, Cerambycidae (pt. 2), U.R.S.S., 1102.

**Lepidoptera:** ALFIERI, spp. new to Sinai, 19.

**Neuroptera:** KIMMINS, Myrmeleonidae, Arabia, 771.

**Diptera:** PARR, Culicines, Syria, Lebanon, 1046; WEYER, *Anopheles* (Culic.), W. Asia, illustrated key, 1453.

**Orthoptera:** UVAROV, *Sphodromerus* (Acrid.), revision, 1410.

**Collembola:** HANDSCHIN, Palestine, 607.

#### ASIA, TROPICAL AND EASTERN.

**Coleoptera:** CHEN, Halticidae, China, list, keys, 259, 260; SAGRINAE, China, Indochina, key, 261; *Cryptocephalus*, China, revision, 262; MIWA & CHÛJÔ, Buprestids, Lncanids, Passalids Paussids, Scarabaeids, Rhysodids—Tricentotomids, Japan, catalogue, 955B; NAKANO & YOSHIDA, myrmecophilous Pselaphids, Japan, list, 990; OIKE, *Cicindela silvatica, hybrida, campestris* group, Japan, distribution, 1019; PLAVIL'SHCHIKOV, Cerambycidae (pt. 2), U.R.S.S., 1102; SAWADA, Valginae (Ceton.), Japan, revision, 1216, 1217; TAKEUCHI, Erotylidae, N.E. Japan, 1344; YANO, Carabidae, Korea, list, 1506.

**Hymenoptera:** CHÛJÔ, ants, Sozan, Formosa, list, 280; DONISTHORPE, ants, S. India, 410; MANI, Serphoidea (Proctotrup.), India, catalogue, 919; OKABE, Vespids, Apids, N. Manchuria, 1020; YOSHIOKA, ants, Gumma Prefecture, Japan, list, 1510.

**Lepidoptera:** CORBET, *Euploea* (Danaid.), key, 328; EVANS, *Suastus, Aeromachus* (Hesp.), revisions, 452, 453; GABRIEL, *Ixias* (Pier.), revision, 545; HASIMOTO, Lycaenids, Shikoku, Japan, 632; NOMURA, moths, Manchuria, list, 1007; SCOTT, Sphingidae, Darjeeling and Sikkim (contd.), 1237; SIBATANI, Aigun, Manchuria, list, 1268; WOODHOUSE & HENRY, butterflies, Ceylon, monograph, 1486; WYNTER-BLYTH, butterflies, Simla, additions, 1504.



**Diptera**: CROOK, *Culicidae*, Szechwan, 350; PURI, *Anophelines*, India, key to larvae, 1124; ZIA, *Trypetidae*, S. China, 1520.

**Hemiptera**: CHEN, *Cicadids*, China, 258; FRASER, *Cicadidae*, N. Bengal and Sikkim (contd.), 515; TSENG & TAO, *Aphidae*, China, 1392.

**Orthoptera**: UVAROV, *Catantops*, revision of *axillaris* group (Acrid.), 1405; *Mesopsis* (Acrid.), revision, 1409.

#### ASIATIC ARCHIPELAGO.

**Coleoptera**: BLACKMAN, *Scolyto-platypus* spp. n. (Scolyt.), Philippines, 126; BOHART, *Halictophagus* sp. n. (Stylop.), Philippines, 153; STROHECKER, new *Endomychids*, Philippines, 1330; TIMBERLAKE, new *Coccinellids*, Philippines, 1372.

**Hymenoptera**: KROMBEIN, *Nippon-onysson* sp. n. (Spheg.), Philippines, 815; NIXON, *Microphanurus* (Scelion.), 1001; *Spathius*, *Paraspathius* (gen. n.) spp. n., Philippines, Java, Borneo, Malaya, 1005.

**Lepidoptera**: CORBET, *Euploea* (Danaid.), key, 328; GABRIEL, *Ixias* (Pier.), revision, 545; TALBOT, *Euthalia*, revision of *lubentina* group (Nymph.), 1349.

**Neuroptera**: BANKS, *Chrysopa nigribasis* var. n., Philippines, 71.

**Diptera**: HULL, *Volucella* sp. n. (Syrph.), Philippines, 698; *Grapto-myza* sp. n., Philippines, *Brachypalpus* sp. n., Java (Syrphid.), 706; SIMMONS & ATTKEN, *Anophelines* (Culic.), Philippines, 1277.

**Orthoptera**: GÜNTHER, *Acrydiinae* (Tetrig.), Sarawak, 596; *Phasmidae*, Borneo, 597.

#### INDO-AUSTRALIAN REGION.

**Lepidoptera**: TALBOT, *Danaus*, revision, 1351; ZEUNER, *Troides* and related groups (Papil.), distribution and phylogeny in relation to geological history, 1519.

#### PAPUAN SUB-REGION.

**Lepidoptera**: CORBET, *Euploea* (Danaid.), key, 328; TALBOT, *Danaus*, new ff., 1351.

**Isoptera**: HILL, termites, monograph, 662.

#### BISMARCK ARCHIPELAGO.

**Coléoptera**: VAN ZWALUWENBURG, *Agonischius* sp. n. (Elat.), New Britain, 1420.

#### MOLUCCAS.

**Coleoptera**: TIMBERLAKE, *Illeis* (CoccineH.) sp. n., Amboina, 1372.

**Hymenoptera**: NIXON, *Spathius* sp. n. (Brac.), Aru I., 1005.

**Odonata**: FRASER, *Lestes* sp. n., Buru, 520.

#### NEW GUINEA.

**Coleoptera**: ARROW, *Endomychids*, 43; *Sphaerotritoma* gen. et spp. n. (Erotyl.), 45; BRYANT, *Cryptocephalus* sp. n., 207; CAMERON, new *Staphylinids*, 228; HINCKS, *Passalids*, Japan I., 665; TIMBERLAKE, *Heterocaria* (Coccinell.), gen. et sp. n., 1372.

**Hymenoptera**: DONISTHORPE, *Formicids*, Waigeu I., 409, 411; *Ireneidris* gen. et sp. n. (Formic.), 413; NIXON, *Spathius*, *Pseudospathius* spp. n. (Brac.), 1005.

#### SOLOMON IS.

**Insecta**: LEVER, 850.

**Coleoptera**: BRYANT, new *Cryptocephalids*, 207.

**Hymenoptera**: NIXON, *Spathius*, *Pseudospathius* spp. n. (Brac.), 1005.

**Trichoptera**: BANKS, *Anisocentropus* sp. n., 71.

#### AUSTRALIA.

**Coleoptera**: ARMSTRONG, *Dermestids*, pts. 2, 3, 39; SEEVERS & DYBAS, *Limulodidae*, fam. n., revision, 1247.

**Hymenoptera**: CLARK, *Promyrmecia* (Formic.), revision, 284.

**Diptera**: HARDY, *Sarcophaginae*, revision, 618; TAYLOR, *Culicidae*, 1360.

**Isoptera**: HILL, termites, monograph, 662.

**Embioptera**: DAVIS, 378.

**Orthoptera:** HEBARD, Chorisoneurinae, Ectobiinae (Blatt.), revision, 644.

# AMERICA, collectively.

**Coleoptera:** DILLON, L. S. & E. S., Monochamini (Lamiid.), W. Hemisphere, supplementary notes, 403; FIEDLER, Tylodina (Curc., Cryptorhynchini), key, 475; PARK, Pselaphids, monograph, 1042; SEEVERS & DYBAS, Limulodidae, fam. n., revision, 1247; WOLCOTT, *Orthopleura* (Cler.), key, 1484.

**Diptera:** HULL, *Mesogramma* (Syrph.), revision, 701; HULL, *Burcha* (Syrph.), revision, 702; SABROSKY, Asteidae (Drosoph.), key to genn., check list, 1196; SELLERS, *Zenillia* and allied genn. (Tach.), revision, 1250; SIMMONS & AITKEN, Anophelines (Culic.), 1277; STEYSKAL, Sepsidae, key to genn., 1323; VARGAS, *Anopheles* subgenn., 1423.

**Hemiptera:** DRAKE, *Monanthia* (Ting.), list, 423; MONTE, *Oncero-trachelus* (Reduv.), list, 965; SCHELL, Ochteridae, revision, 1222.

# NORTH AMERICA.

**Insecta:** LINSLEY, political versus faunal boundaries in systematics, 863.

**Coleoptera:** BARBER, *Rhabdopterus* (Eumolp.), revision, 76; BLACKMAN, *Phloeosinus* (Scolyt.), revision, 127; BLAISDELL, Tenebrionidae, Lower California, 137; BOHART, *Halictophagus* (Stylop.), key, 153; BROWN, *Ezema*, *Arthrochlamys* (Cryptoceph.), Canada, 197; CAZIER & McCLAY, *Coenonycha* (Melolon.), revision, 249; DARLINGTON, Carabidae, mountains and islands, 371; FISHER, Chrysobothrini (Bupr.), revision, 484; GLEN, KING & ARNASON, wireworms (Elat.), Canada, key, 562; LA RIVERS, *Eleodes* (Tenebr.), Nevada, list, 830; MALKIN, Coccinellidae, Oregon, catalogue, 914; SCHOOF, *Conotrachelus* (Curc.), north central United States, 1226; TANNER, Hydronomi (Curc.), revision, 1358; WERNER, *Pleuropompha* (Meloid.), revision, 1449.

**Hymenoptera:** BANKS, *Tachytes* (Larrid.), 72; BOHART, *Stenodynerus*, group *anormis* (Vesp.), revision, 154; BRUES, *Rhopalosoma*, revision, 202;

BURKS, *Tetrastichus* (Euloph.), revision, 217; COLE, Formicidae, Utah, revision, 302; DREISBACH, *Vespula* (Vesp.), Michigan, keys and distribution, 424; FERNALD, Sphecinae, Florida, annotated list, 466; GAHAN, *Arachnophaga*, *Encyrtaspis* (Eupelm.), revision, 546; LINSLEY, *Townsendiella*, *Triopasites*, *Paranomada* (Apid.), revision, 868; *Neopasites* (Apid.), revision, 869; *Gnathopasites* (Apid.), revision, 870; MICHENER, *Anthocopa* (Apid.), revision, 942; ROSS, *Rhoggaster* (Tenth.), revision, 1172; *Aglostigma* (Tenth.), revision, 1173; SMITH, *Solenopsis* (subgen. *Diplorhoptrum*) workers, key, 1291; TAYLOR, Vespinae, W. Virginia, list, 1363; TIMBERLAKE, *Colletes* (Apid.), Colorado and western U.S., revision, 1371; *Dianthidium* (Apid.), revision, 1373.

**Lepidoptera:** CAPPS, Ennominae (Geom.), 234; HOVANITZ, *Argynnis callippe* (Nymph.), California, races, 690; JERRELL & JAKES, Noctuidae, Iowa, preliminary list, 735; JONES & KIMBALL, Nantucket and Marthas Vineyard Is., Mass., 738; McDUNNOUGH, *Zale obliqua-metata* group (Noct.), revision, 896; RUPERT, *Metarranthis* (Geom.), revision, 1190.

**Trichoptera:** DENNING, Hydropsychidae, Minnesota, revision, 393.

**Diptera:** ADAMS & GORDON, mosquitos, Missouri, 4; ALEXANDER, Tipulidae, Gunnison Valley, Colorado, 9; ALEXANDER IN CRAMPTON et al., Tipulids and allied families, Connecticut, 342; BROOKS, *Ernestia* (s.l.) (Tach.), Canada, revision, 189; *Gonia* (s.l.) and allied genn. (Tach.), revision, 190; CAMRAS, *Zodion* (Conop.), key to groups, 232; CHAGNON & FOURNIER, Tabanidae, Quebec, revision, 253; CRAMPTON et al., Connecticut, 342; HARDY, Dorilaidae (Pipuncul.), revision, 617; JAMES, *Adoromyia* (Strat.), revision, 725; KING & BRADLEY, *Anopheles* (Culic.), 783; KING, BRADLEY & McNEEL, mosquitos, Southeastern States, 785; PATTERSON, *Drosophila virilis* group, 1062; Drosophilidae, south-western States, revision, 1063; PATTERSON & WAGNER, *Drosophila*, distribution, 1065; PRITCHARD, *Cophura* (Asil.), revision, 1123; RAPP, Smith's 1909 list, N. Jersey, additions, 1133; REES,

mosquitos, Utah, revision, 1140; ROSS & ROBERTS, *Anopheles* (Culic.), 1171; ROTH, *Culex*, south-eastern United States, key, 1175; ROWE, Culicidae, Iowa, list, 1177; ROZEBOOM, mosquitos, Oklahoma, 1180; SABROSKY, *Thaumatomyia* (Chlorop.), revision, 1197; STAINS & KNOWLTON, Simuliidae, western U.S.A., 1315; STEYSKAL, *Pholeomyia* (Milich.), key, 1322; VARGAS, *Anopheles maculipennis* group, 1424.

**Siphonaptera:** EWING & FOX, revision, 454; FULLER, New England, 535; HUBBARD, California and other States, Br. Columbia and Alaska, 694; JELLISON, KOHLS & MILLS, Montana, list, 733; MAIL & HOLLAND, Br. Columbia and Alberta, list, 911.

**Hemiptera:** DELONG, Gyponinae (Jass.), exclusive of *Xerophloea*, revision, 387; DOERING & DARBY, *Orgerius* (Dictyophar.), revision, 408; FERRIS, *Melanaspis* (Coccid.), key, 472; HARRIS, S. Dakota, additions to list, 627; KNULL, *Neocoelidia* (Jassid.), revision, 799; MEDLER, Jassids, Minnesota, revision, 934; SMITH & KNOWLTON, *Drepanaphis*, key, 1287; TUTTILL, Psyllinae, Triozinae, revision, 1397.

**Isoptera:** EMERSON & MILLER, Florida, key, 439.

**Plecoptera:** FRISON, revision, 528; HANSON, Perlodidae and *Isozenoides*, revision, 610.

**Odonata:** MONTGOMERY, Indiana, 967; Ohio, 969; WALKER, subarctic N. America, 1436; WRIGHT, lower Mississippi delta and Central Gulf coast, 1495; Tennessee, additions, 1498.

**Dermoptera:** CANTRALL, George Reserve, Michigan, 233; HEBARD, Texas, 645.

**Orthoptera:** BALL, TINKHAM, FLOCK & VORHIES, Arizona, 65; CANTRALL, George Reserve, Michigan, 233; HEBARD, Blattids, Mantids, Phasmids, Texas, 645; REHN, *Psoloessa* (Acrid.), revision, 1143; REHN, J. A. G. & J. W. H., *Paratyloptropidia* (Acrid.), revision, 1147.

#### CENTRAL AMERICA.

**Insecta:** FAIRCHILD, blood-sucking insects, Panama, annotated list, 457.

**Coleoptera:** PARK, Pselaphidae, Mexico, preliminary revision, 1043; SAYLOR, *Phyllophaga* (Melolonth.), revision of group *testaceipennis*, 1218.

**Lepidoptera:** BROWN, Papilionidae, Mexico, 196; FORBES, Barro Colorado I., Panama, no. 2, 496.

**Diptera:** CURRAN, Syrphidae, keys, 358; FAIRCHILD, Tabanids, Panama, revision, keys, check list, 458; KOMP, Anophelines (Culic.), 804, 805; PATTERSON, Drosophilidae, Mexico, revision, 1063; PATTERSON & WAGNER, *Drosophila*, Mexico, distribution, 1065.

**Hemiptera:** DELONG, *Cloanthanus* (Jass.), Mexico, revision, 390; DE LA TORRE-BUENO, Heteroptera, Mexican fauna should be included in N. American records, 1382.

**Odonata:** CALVERT, discussion, 226.

#### SOUTH AMERICA, including TRINIDAD.

**Insecta:** CARVALHO, M. B. & R. F. DE, Pernambuco, catalogue, 244; HAYWARD, Tucumán, Argentina, injurious insects, list, 640; WILLE, agricultural pests, Peru, 1464.

**Coleoptera:** BLACKWELDER, Staphylinidae, monograph, 130; BONDAR, Curculionids, Brazil, 160; BRUCH, Passalids, Argentina, list, 200; FIEDLER, *Acalles* (Curc.), revision, 476; *Phyrdenus* (Curc.), revision, 477; GUTIÉRREZ, Scarabaeids, Chile, 601; MONRÓS, *Atalasis* (Sagrid.), revision, 957; ORELLANA O., Elaterids, Chile, revision, 1027; SILVERIO PEREIRA, *Pinotus* (Copr.), Passalids, Parana, lists, 1271; *Pinotus* group *semiaenus* (Copr.), key, 1272; *Pseudacanthinae* (Passal.), revision, 1273; SOUKUP, Peru, 1303.

**Hymenoptera:** BEQUAERT & RUIZ P[ÉREZ], Gayellinae, Zethinae (Vesp.), Chile, revision, 115; DURÁN-MOYA, Thynnidae, Chile, revision, 425; GAHAN, *Arachnophaga*, *Encyrtaspis* (Eupelm.), revision, 546; MICKEL, *Atilium* (Mutill.), revision, 944; RUIZ P[ÉREZ], Apids, Chile, revision, 1182A; SCHWARZ, *Anthidium* (Apid.), Peru, key, 1232; WEYRAUCH, social wasps, Peru, distribution, 1454.

**Lepidoptera :** BREYER, *Castnia*, Argentina, list, 182; BROWN, *Lymanopoda* (Satyr.), Ecuador, revision, 195; HAYWARD, Pyrrhopyginae (Hesper.), Nat. Mus. Brazil, 639; DE MARTIN, Peru, additions, 926.

**Trichoptera :** DA COSTA LIMA, Brazil, 336.

**Megaloptera :** BANKS, northern districts, list, 70.

**Neuroptera :** DA COSTA LIMA, Brazil, 336.

**Mecoptera :** DA COSTA LIMA, Brazil, 336.

**Diptera :** ALEXANDER, Tipulids, Brazil, IX, 16; BEQUAERT, Pupipara, Venezuela, list, keys, 105; Hippoboscidae, S. Brazil, 113; BRUCE, KNIGIN, YOLLES & GRAHAM, *Anopheles*, Br. Guiana, 198; CURRAN, Syrphidae, keys, 358; GALVIS, Anophelines, Colombia, revision, 548; GUIMARÃES & CARRERA, *Cuterebra* (Oestr.), Brazil, 595; HERTIG, *Phlebotomus* (Psychod.), Peru, 659; JAMES, Rhaphiocerinae (Strat.), revision, 723; KOMP, Anophelines, revision, 805; LANE, *Uranotaenia* (Culic.), revision, 824; LANE & CARRERA, *Ceriodides* (Syrph.), 826; LANE & CERQUEIRA, Sabethinae (Culic.), revision, 827; ORTIZ, *Phlebotomus* (Psychod.), Venezuela, 1028; SENEVET & ABONNENC, *Culex*, French Guiana, 1252; *Aedes* (*Finlaya*) (Culic.), Fr. Guiana, 1253; SENEVET, CHABELARD & ABONNENC, mosquitos, Fr. Guiana, 1254.

**Siphonaptera :** DA COSTA LIMA, Brazil, 336.

**Hemiptera :** CARVALHO & DRAKE, Capsids, Chile, 243; CHINA, Veliidae, Trinidad, 273; CHRISTENSEN, Membracidae, Argentina and neighbouring countries, list, 278; FUNKHOUSER, Membracidae, Guatemala, 537; LE PAGE & GIANNOTTI, Coccids, N.E. Brazil, 845; PORTER, *Apateticus* (Pentat.), Chile, 1110; RICHTER, Membracidae, Colombia, II-IV, 1158; WYGODZINSKY, Vesciinae (Reduv.), revision, 1500.

**Psocoptera :** WILLINER, Argentina, 1477, 1478.

**Ephemeroptera :** SPIETH, Dutch Guiana, 1310.

**Odonata :** GEIJSKES, *Coryphaeschna*, Surinam, 551.

**Orthoptera :** LIEBERMANN, Acrididae, Chile, Argentina, 854; *Cornops* (Acrid.), list, 856; PIRÁN, Tettigoniids, Argentina, new records, 1100; REHN, Aucas group, revision (Acrid.), 1145.

## ANTILLES.

**Coleoptera :** BALTHASAR, *Ataenius* sp. n. (Aphod.), Haiti, 66; BLACKMAN, *Tachyderes parvus* gen. et sp. n. (Scolyt.), Cuba, 125; *Chalcocytus* gen. et sp. n., Porto Rico, Haiti; *Cryptocleptes* sp. n., Cuba (Scolyt.), 128; new Scolytids, Jamaica, Cuba, Virgin Is., 129; BLACKWELDER, Staphylinidae, W. Indies, monograph, 130; BRYANT, *Cryptocephalus*, Jamaica, list and spp. n., 208; DARLINGTON, Carabidae, 371; FISHER, new Cerambycids, Cuba, Haiti, Jamaica, 483.

**Hymenoptera :** FERNALD, *Chlorion* sp. n. (Spheg.), Cuba, 465.

**Lepidoptera :** CARPENTER & LEWIS, Rhopalocera, Cayman Is., annotated list, 239; CLENCH, Lycaenidae, Bahamas, 291; *Calisto* sp. and subspp. n. (Satyr.), 292; COMSTOCK, *Ascia* (Pier.), 320; *Appias* (subgen. *Glutophrissa*) *drusilla* subsp. n. (Pier.), Dominican Rep., Haiti, 321; MICHENER, *Calisto*, Greater Antilles, Bahamas, revision, 941.

**Diptera :** HULL, *Volucella* (Syrph.), sp. n., Jamaica, 698; *Baccha* spp. (Syrph.), Porto Rico, Haiti, Cuba, 701; *Microdon* sp. n. (Syrph.), Cuba, 711; KOMP, *Anopheles* (Culic.), W. Indies, 804; Anophelines, revision, 805; MACFIE, *Dasyhelea* (Ceratopog.), Bahamas, 898; PRATT, *Anopheles* (Culic.), first-stage larvae, Porto Rico, 1120; ROZEBOOM, *Anopheles* (Culic.), Caribbean Region, distribution, 1179; SENEVET & QUIÉVREUX, mosquitos, Martinique, 1255.

**Hemiptera :** CALDWELL, new Psyllids, Porto Rico, 222; DRAKE, *Amblystira* sp. n. (Tingid.), Haiti; *Leptopharsa* sp. n. (Tingid.), Antigua, 422; FENNAH, *Bothriocera*



(Cixiid.), spp. n., 464; RUSSELL, *Bellitudo* gen. et spp. n. (Aleur.), Jamaica, Haiti, Dominican Repub., Cuba, 1192; SCHELL, *Ochterus* sp. n., Cuba, 1222.

**Isoptera:** EMERSON, *Kaloterмес* sp. n., Jamaica, 438.

**Odonata:** FRASER, Cayman Is., 512.

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*Lobochilus labralis*, *brevipennis*, *brachypterus* spp. n. Ghum District p. 33, CAMERON Proc. R. ent. Soc. Lond. (B) 12.

*Lobrathium darlingtoni* Trinidad p. 317, *odium* Cuba p. 318, *reductum* p. 319, *pluviosum* p. 320 Dominican Repub., *borinquense* Porto Rico p. 319, spp. n., BLACKWELDER Bull. U.S. nat. Mus. no. 182. Cf. also *Lathrobium*.

*Medon johni* Dominica, St. Lucia p. 271, *matasana* Dominican Repub., *dominicanum* Dominican Repub., Haiti p. 272, *trinitatum* Trinidad p. 273, *cubanum* p. 274, *schwarzi* p. 275, *cordatum* p. 276 Cuba, spp. n., BLACKWELDER Bull. U.S. nat. Mus. no. 182.—*M. melancholicus*, *morosus*, (*Hypomedon*) *fungi*, (*H.*) *laevior* p. 34, (*H.*) *ghumensis* p. 35, spp. n. Ghum District, CAMERON Proc. R. ent. Soc. Lond.

(B) 12.—*M. (Hypomedon) darwini* sp. n. Australia p. 341, CAMERON Ann. Mag. n. H. (11) 10.

*Medonella* see *Sunius*.

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*Metamimeciton* subgen. n. (type *antennatus* Mann) see *Mimeciton*.

*Mimeciton* (*Metamimeciton* subgen. n.) p. 232, REICHENSPERGER Rev. Ent. Rio de J. 6 1936.

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*Neosilusa stricticollis* sp. n. Sarawak p. 40, CAMERON Ent. mon. Mag. 79.

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*Aplastus piceus* sp. n. California p. 43, VAN DYKE Pan-Pacif. Ent. 19.

*Athous turhalus* [? sp. n. and described] Turkey p. 72 [in Turkish], IYRIBOZ Pests and Dis. Sugar-beet 1934.

*Conoderus duplicatus* n. n. for *bicarlinatus* Van Dyke nec Reitt. p. 44, VAN DYKE Pan-Pacif. Ent. 19.

*Elater sturmii* see *Megapenthes*.

*Euthysanius wagneri* sp. n. California p. 42, VAN DYKE Pan-Pacif. Ent. 19.

*Limonijs cribriceps* p. 44, *arizonicus* p. 45 spp. n. U.S.A.; *discoideus* Lec. p. 46, *infuscatus* Mots., *pilosulus* Cand. p. 47 discussed, VAN DYKE t.c.

*Ludius sierrae* sp. n. California p. 48; *cribrosus* Lec. and allied spp. discussed p. 49; *nigricans* Fall a valid sp. p. 50, VAN DYKE t.c.



*Megapenthes sturmi* Germ. from *Elater* p. 51, VAN DYKE t.c.—*M. porticulata* p. 292, *levuensis* p. 293, *parrus*, *insularis* p. 294, *tenuis* p. 295 spp. n. Fiji; key to spp. from Fiji p. 296, VAN ZWALUWENBURG Proc. Hawaii. ent. Soc. 11.

*Melanotus longulus* Lec. a valid sp. p. 51, VAN DYKE Pan-Pacif. Ent. 19.

*Pacificola hermosa* sp. n. Marquesas Is. p. 297, VAN ZWALUWENBURG Proc. Hawaii. ent. Soc. 11.

*Propsephus* key to spp. from Oceania; *zimmermani* sp. n. Fiji p. 290 figs., VAN ZWALUWENBURG t.c.

#### BUPRESTIDAE.

Revision of N. American Chrysobothrini, FISHER Misc. Publ. U.S. Dep. Agric. no. 470 1942 274 pp. 126 figs.

Catalogue of Japanese Buprestidae, MIWA & CHÛJÔ Cat. col. japon. pars 1 1936 1-36 + 4 + 3 pp.

Descriptions of little-known Chilean Buprestids, OLAVE O. Rev. chil. H. n. 44 1940 pp. 119-126, 1 pl.

*Acmaeodera linsleyi* p. 101, *moronga* p. 102, spp. n. California, VAN DYKE Pan-Pacif. Ent. 19.

*Agrilaxia balloui* sp. n. Venezuela p. 89, FISHER Bol. Ent. venezolana 1 1942.

*Agrilus diospyroides* sp. n. Tennessee p. 390 figs., KNULL Ann. ent. Soc. Amer. 35.—*A. callani* p. 375, *praedae* p. 377, *picinus* p. 378, *trinidadensis* p. 379, spp. n. Trinidad, FISHER Proc. U.S. nat. Mus. 93 no. 3167.—*A. frisoni* sp. n. Texas p. 201, FISHER Proc. ent. Soc. Wash. 45.

*Anthaxia proteus* varr. n. *minuta*, *matsumurae* p. 275, *rubromarginata*, *viridimarginata* p. 276 Japan, MIWA & CHÛJÔ Ent. Wld. Tokyo 3 1935 [not seen].

*Buprestis japonensis* subsp. n. *saghalinensis*; *unicus* sp. n. p. 272; *aurulenta* subsp. n. *niponica* p. 273 Japan, MIWA & CHÛJÔ t.c.

*Chalcophora satsumae* var. n. *abnormale* Japan p. 270, MIWA & CHÛJÔ t.c.

*Chrysobothris shirakii* sp. n. Japan p. 276, MIWA & CHÛJÔ t.c.—*C. verdevallii*

sp. n. Arizona p. 202, FISHER Proc. ent. Soc. Wash. 45.—*C. Esch.* (= *Knowltonia* Fisher) p. 17, key p. 20; *chamberlini* n. n. for *calcarata* Chamberl. Melsh. p. 40; *oregona* Chamb. (= *planomarginata* Chamb.) p. 53; *semisculpta* Lec. (= *contigua* Lec.) p. 83; *prospodidis* p. 70, *helpferi* p. 92, *neopusilla* p. 102, *hubbardi* p. 174, *wickhami* p. 209, *fiskei* p. 221 spp. n. U.S.A.; *ignicolis* Horn (= *scotti* Chamb.) p. 94 figs., FISHER Misc. Publ. U.S. Dep. Agric. no. 470 1942.—*C. paragrindeliae* sp. n. California p. 42 figs., KNULL Ohio J. Sci. 43.—*C. ephedrae* sp. n. Texas p. 390 figs., KNULL Ann. ent. Soc. Amer. 35.—*C. culbertsoniana*, *crandalli*, spp. n. U.S.A. p. 34 figs., KNULL op. cit. 36.

*Coraeus mushensis* p. 277, *pruni*, *sonani* p. 278, *formosanus* p. 279 spp. n.; *insulicola* var. n. *rubrifrons* p. 280 Formosa, MIWA & CHÛJÔ Ent. Wld. Tokyo 3 1935 [not seen].

*Cylindromorphus formosanus* sp. n. Formosa p. 281, MIWA & CHÛJÔ t.c.

*Eurythyrea kawakamii* sp. n. Japan p. 271, MIWA & CHÛJÔ t.c.

*Knowltonia* see *Chrysobothris*.

*Lampra masudai* sp. n. Japan p. 95, KANO Lansania 1 1929 [not seen].

*Poecilnota cupreomaculata* sp. n. Japan p. 271, MIWA & CHÛJÔ Ent. Wld. Tokyo 3 1935 [not seen].

*Pterobothris corrosus* var. n. *paulseni* Chile p. 124 fig., OLAVE O. Rev. chil. H. n. 44 1940.

*Sambus formosanus* p. 280, *quinquefasciatus* p. 281, spp. n. Japan, MIWA & CHÛJÔ Ent. Wld. Tokyo 3 1935 [not seen].

*Tamamushia* gen. n. p. 274, *virida* sp. n. Japan p. 275, MIWA & CHÛJÔ t.c.

#### TENEBRIONIDAE (BORIDAE, RHYSOPOUSSIDAE, TRETOTHORACIDAE).

Litoborinae of Morocco (key to genn. p. 44), ANTOINE Bull. Soc. Sci. nat. Maroc 21 (1941) 1942 pp. 19-52, 30 figs.

Tenebrionidae of Lower California, BLAISDELL Proc. Calif. Acad. Sci. (4) 24 pp. 171-287, 2 pls.

Tenebrionidae of Ifni and Spanish Sahara, ESPAÑOL COLL Eos 19 pp. 119-148, 4 figs.

Catalogue of Japanese Rhysopausidae, MIWA & CHŪJŌ Cat. col. japon. pars 6 1938 p. 53.

*Amphidora subdeplanata* sp. n. California p. 252, BLAISDELL Proc. Calif. Acad. Sci. (4) 24.

*Araeoschizus limbatus* p. 214, *antennatus* p. 215, spp. n. California figs., BLAISDELL t.c.

*Argoporis apicalis* sp. n. California p. 234 figs., BLAISDELL t.c.

*Arthrodeis rungsi* sp. n. p. 121 (with subsp. n. *bulloni* p. 122) N.W. Africa figs., ESPAÑOL COLL Eos 19.

*Blaps murati* sp. n. Mauritania p. 23, DE PEYERIMHOFF Bull. Soc. H. n. Afr. N. 34.

*Blapstinus densipunctatus* sp. n. California p. 256, BLAISDELL Proc. Calif. Acad. Sci. (4) 24.

*Centrioptera michelbacheri* sp. n. California p. 222, BLAISDELL t.c.

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*Conibius oblongus* sp. n. California p. 257, BLAISDELL Proc. Calif. Acad. Sci. (4) 24.

*Coniontides keiferi* sp. n. California p. 189, BLAISDELL t.c.

*Crypticus* (*Seriscius*) *alluardi* sp. n. Canary Is. p. 11, DE PEYERIMHOFF Bull. Soc. ent. Fr. 47 1942 [not seen].

*Cylindronotus* (*Nesotes*) *tuberculinensis* subsp. n. *villarrubiai* Ifni p. 144, ESPAÑOL COLL Eos 19.

*Dichillus cyrenaicus* notes pp. 165-166 fig., BARBIER Bull. Soc. Fouad 1<sup>er</sup> Ent. 26 1942.

*Dilamus volkonskyi* sp. n. (with subsp. n. *battareli*) Sahara p. 24; key to spp. p. 25 figs., DE PEYERIMHOFF Bull. Soc. H. n. Afr. N. 34.

*Echocerus breviceps* sp. n. California p. 266, BLAISDELL Proc. Calif. Acad. Sci. (4) 24.

*Edrotes desertus* sp. n. California p. 212, BLAISDELL t.c.

*Eleodes rossi* p. 241, *marthae* p. 243, *mexicana* p. 246, *simondsi* p. 247, spp. n. California, BLAISDELL t.c.—*E.* list of Nevada spp. pp. 53-61; *extricata* subsp. n. *frigida* Nevada p. 54 fig., LA RIVERS J. Ent. Zool. 35.

*Erodium bicostatus* subsp. n. *vittatus* Sahara p. 22, DE PEYERIMHOFF Bull. Soc. H. n. Afr. N. 34.

*Eurycaulus* revision of N.W. African spp. p. 215, key p. 217; *pachecoi* sp. n. Spanish Sahara p. 216 figs., DE LA ESCALERA Eos 19.

*Falsocaedius* subgen. n. (type *fossulatus* Esc.) see *Clitobius*.

*Glabrasida pernitida* sp. n. p. 45; *nemethi* subsp. n. *ganayi* p. 46 Morocco, ANTOINE Bull. Soc. Sci. nat. Maroc 22.—*G. calagurriense* p. 203, *javalambrense* p. 206 spp. n.; *grossepunctata* varr. n. *sacañetense*, *millarense* p. 205 Spain, DE LA ESCALERA Bol. Soc. esp. H. n. 41.

*Granulasida humeralis* sp. n. Spain p. 199, DE LA ESCALERA t.c.

*Heliophilus batnensis* subsp. n. *taze-kensis*; *rex* sp. n. Morocco p. 48 figs., ANTOINE Bull. Soc. Sci. nat. Maroc 22.

*Helops sparsus* sp. n. California p. 274, BLAISDELL Proc. Calif. Acad. Sci. (4) 24.—*H. magnificus* pupa p. 503 figs., PARDO ALCAIDE Bol. Soc. esp. H. n. 40 1942.

*Litoborus moreleti* subsp. n. *mediterraneus* Moyen Atlas p. 22, ANTOINE Bull. Soc. Sci. nat. Maroc 21 1942.

*Machlasida* (*Protomachlasida*) *boissangeri* sp. n. Moyen Atlas p. 45 figs., ANTOINE op. cit. 22.

*Melambius* (*Hopliariobius*) *hassani* p. 26, (*H.*) *vidali* p. 27, (*H.*) *asniensis* p. 28, (*H.*) *anemophilus* p. 30, (*H.*) *androgynus* p. 31, (*H.*) *venustus* p. 32, (*H.*) *cultriger* p. 33, (*H.*) *latissimus* p. 38, (*H.*) *major* p. 40, (*H.*) *lacouri* p. 41, (*M.*) *otini* p. 42 spp. n.; (*H.*) *cacuminorum* abb. n. *humeralis*, *subsinnuatus* p. 29; (*H.*) *angulatus* subsp. n. *gundaficus* Morocco; (*H.*) *bedeli* Esc. (= *globosus* Esc.) p. 37 figs., ANTOINE op. cit. 21 1942.—*M.* (*Hopliariobius*) *bedeli* subsp. n. *insolens* Morocco p. 46, ANTOINE op. cit. 22.

*Metopoloba subpilosa* sp. n. California p. 199, BLAISDELL Proc. Calif. Acad. Sci. (4) 24.

*Metoponium transversum* p. 174, *erosum* p. 175, spp. n. California, BLAISDELL t.c.

*Opatrinus niloticus* subsp. n. zolotarevskiy N.W. Africa p. 138 figs., ESPAÑOL COLL Eos 19.

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*Otinia* gen. n. p. 22, *iblanensis* sp. n. Morocco p. 23 figs., ANTOINE Bull. Soc. Sci. nat. Maroc 21 1942.

*Pachychila compacta* sp. n. p. 41 (with subsp. n. *subaspera* p. 42); (*Neacisba*) *prosternalis* subsp. n. *aya-chiensis*; (*N.*) *rotrovi* subsp. n. *perissa* p. 59; (*N.*) *muluyensis* sp. n.; (*P.*) *punctata* subsp. n. *mamorenensis* p. 60; (*P.*) *calida* subsp. n. *subangulicollis*; (*P.*) *grandis* subsp. n. *debduenensis* p. 61; (*P.*) *reini* ab. n. *difficilis* p. 62, subsp. n. *asniensis*; (*P.*) *secsavia* subsp. n. *insidiosa* p. 63; (*P.*) *breviuscula* subsp. n. *discrepans* p. 64; (*P.*) *schrampi* p. 63, (*Hegeteromorpha*) *trisulcata* spp. n. Morocco; (*P.*) *insculpta* Esc., (*P.*) *tumidifrons* distinct spp. p. 60; (*P.*) *sulcifrons* Sol. characters p. 64; genitalia discussed p. 66; key to subgen. and spp. of Morocco p. 67 figs., ANTOINE op. cit. 22.

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*Pimelia* (*Homalopus*) *cordata* subsp. n. *zarcoi* p. 133; (*P.*) *moralesi* sp. n. p. 135 N.W. Africa figs., ESPAÑOL COLL Eos 19.

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*Scaurus uncinus* subsp. n. *ferreri* p. 130; *quirogai* var. n. *lopezi* p. 131 N.W. Africa, ESPAÑOL COLL Eos 19.

*Stenomorpha tumidicollis* sp. n. California p. 226, BLAISDELL Proc. Calif. Acad. Sci. (4) 24.

*Stibia ferruginea* sp. n. California p. 208, BLAISDELL t.c.

*Telaponium pingue* sp. n. California p. 179, BLAISDELL t.c.

*Tentyria atlantis* sp. n. Grand Atlas p. 43, ANTOINE Bull. Soc. Sci. nat. Maroc 22.

*Tonibius rossi* sp. n. California p. 260, BLAISDELL Proc. Calif. Acad. Sci. (4) 24.

*Trimytis* (*Pimalius*) *ceralboensis* sp. n. California p. 196, BLAISDELL t.c.

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*Triphalus impressifrons* sp. n. California p. 202, BLAISDELL t.c.

*Trogloclerus* key to spp.; *nevadus* sp. n. U.S.A. p. 437, LA RIVERS Ann. ent. Soc. Amer. 35.

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Catalogue of Japanese Trictenotomidae, MIWA & CHŪJŌ Cat. col. japon. pars 6 1938 p. 61.

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*Cerogria buruensis* sp. n. Buru I. p. 429, BORCHMANN t.c.

*Lagria blairi* var. n. *unicolor* Buitenzorg p. 422, BORCHMANN t.c.

*Lagriodema* gen. n. pp. 442, 524 (no species included), BORCHMANN t.c.

*Sora fuscostriata* sp. n. Luzon p. 474; *fuscolineata* n. n. for *marginata* Borchm pp. 477, 482, BORCHMANN t.c.

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Catalogue of Japanese Monommidae, MIWA & CHŪJŌ Cat. col. japon. pars 6 1938 p. 57.

## SCRAPTIIDAE.

Catalogue of Japanese Scraphtiidae, MIWA & CHÛJÔ Cat. col. japon. pars 6 1938 p. 59.

## AEGIALITIDAE.

Catalogue of Japanese Aegialitidae, MIWA & CHÛJÔ Cat. col. japon. pars 6 1938 p. 51.

## OTHNIIDAE.

Catalogue of Japanese Othniidae, MIWA & CHÛJÔ Cat. col. japon. pars 6 1938 p. 55.

## ANTHICIDAE.

*Anthicus (Aulacoderus) picheyrei* sp. n. Hoggar p. 16, DE PEYERIMHOFF Bull. Soc. H. n. Afr. N. 34.

*Mecynotarsus picheyrei* sp. n. Hoggar p. 15, DE PEYERIMHOFF t.c.

*Pseudonotoxus ringens* sp. n. Hoggar p. 14 fig., DE PEYERIMHOFF t.c.

## MELOIDAE.

*Eletica* early stages pp. 56-58, BLAIR Ent. mon. Mag. 79.

*Epicauta* and allied genn. notes on primary larvae pp. 176-179 figs., CROS Bull. Soc. Sci. nat. Maroc 19 1941.

*Lytta magister* larval characters p. 364 figs., MACSWAIN Ann. ent. Soc. Amer. 36.

*Meloe opacus* primary larva p. 76, LINSLEY & MICHENER Pan-Pacif. Ent. 19.

*Mylabris gilvipes* discussed p. 90, primary larva p. 95; *wartmanni* primary larva p. 102, CROS Bull. Soc. Sci. nat. Maroc 19 1940.

*Pleuropompha* revision pp. 30-33, key p. 30; *tricotata* sp. n. U.S.A. p. 32, WERNER Psyche 50.

*Poreospasta* primary larva p. 361; in subfam. Lyttinae p. 362; *polita* larval characters p. 364 figs., MACSWAIN Ann. ent. Soc. Amer. 36.

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## STYLOPIDAE.

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*Eurystylops* n. n. for *Pseudostylops* Boh. nec Amegh. p. 12; *tetonensis* sp. n. Wyoming p. 13, BOHART Bull. Brooklyn ent. Soc. 38.

*Halictophagus* key to spp. in America north of Mexico p. 342; *insularum* Pierce (? = *Diozocera insularum* subsp. *vincenti* Pierce, *argentinae* P., *comstocki* P. (and var. *elsegundinis* P.)) p. 344; *omani* U.S.A., Alberta p. 345, *obtusae* Costa Rica p. 346, *callosus* p. 350, *serratus* p. 351, *acutus* p. 352 U.S.A., *indicus* India p. 356, *gressitti*, *chinensis* China p. 357, *piperi* Luzon p. 358 spp. n.; *oncometopiae* Pierce (= *Dacrytocara undata* P.) p. 348 figs., BOHART Ann. ent. Soc. Amer. 36.

*Mengenilla spinulosa*, *subnigrescens*, *laevigata*, *parvula* Sicily, *nigritula* Italy, spp. n. in pp. 614-618, SILVESTRI R.C. Accad. Lincei (7) 1 1940 [not seen].

*Pseudostylops* see *Eurystylops*.

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Catalogue of Japanese Scarabaeidae, MIWA & CHÛJÔ Cat. col. japon. pars 5 1939 94 pp.

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The genera and nomenclature of Lucanids, ARROW Proc. R. ent. Soc. Lond. (B) 12 pp. 133-143.

Catalogue of Japanese Lucanidae, MIWA & CHÛJÔ Cat. col. japon. pars 2 1936 11 + 3 pp.

*Aegotypus auritus* sp. n. N. Borneo p. 142, ARROW Proc. R. ent. Soc. Lond. (B) 12.

*Aegus* MacI. (= *Xenostomus* Boil., *Paraegus* Gahan); *alternatus* Fairm. (= *Metallactulus bennigseni* Boil.); *woodfordi* Wat. (= *barbatus* Nagel) p. 140; *laevicollis* Saund. (= *subnitidus* Wat.); *laticollis* n. n. for *dilaticollis* Rits. nec Parry; *pengalenganus* Poll (= *javanicus* Oberth. & Houlb.); *delicatus* sp. n. Perak p. 141, ARROW t.c.



*Apterocyclus waterhousei* Sharp valid  
sp. p. 138, ARROW t.c.

*Apterodorcus* gen. n. for *Lucanus*  
*bacchus* Hope & Westw. p. 139, ARROW  
t.c.

*Calcodes parryi* Leuthner (= (*Neolucanus*)  
*leuthneri* Boil. 1899 nec (*Odontolabis*)  
l. 1897); *chinensis* sp. n. Formosa,  
Foochow; *celebicus* n. n. for (*N.*) *cele-*  
*bensis* Möll. nec (*O.*) *c.* Leuthner; (*N.*)  
*intermedius* Houlb. (nec Poll) a var. of  
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*Gonometopus* Houlb., *Pelecognathus* H.,  
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*rufobrunneus* n. n. for *castaneus* Did.  
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*typhoniformis* Nagel, *typhon* Boil.);  
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Did.); *natalensis* Parry (= *hanning-*  
*toni* Wat.); *serricornis* Latr. (= *curvi-*  
*dens* Nonfr.); *bison* Oliv. (= *magnificus*  
Möll.); *polymorphus* n. n. for *parryi*  
Boil. nec Thoms.; *dauidianus* n. n. for  
*dauidis* Fairm. nec Deyr.; *sewertzowi*  
Sem. (= *rugatus* Did.); *submolaris*  
Hope (= *fuliginosus* Did.); *dentifer*  
Deyr. (= *parallelus* Did.); *buddha*

Hope (= *cardoni* Did.); *subnitens*  
Parry (= *parvus* Did.); *bisignatus*  
Parry (= *rufonotatus* Pouill.); *crenuli-*  
*dens* Fairm. (= *denticulatus* Boil.) p.  
138, ARROW Proc. R. ent. Soc. Lond.  
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*Eligmodontus* see *Dorcus*.

*Epipedus* see *Pycnosiphorus*.

*Figulus linearis* Did. from *Cardanus*;  
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*monochromus* Did.) p. 139, ARROW Proc.  
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*Gonometopus* see *Dorcus*.

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*Leptinopterus burmeisteri* sp. n. (= *poly-*  
*odontus* of Burm.) p. 135, ARROW  
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*Lissapterus montivagus* sp. n. Queens-  
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*Lissotes darlingtoni* sp. n. Australia  
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*Lucanus laetus* n. n. for *oberthuri*  
Planet 1897 nec 1896 p. 134, ARROW  
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*L. bacchus* see *Apterodorcus*.

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*Pelecognathus* see *Dorcus*.

*Prismognathus branczicki* ♀ p. 38,  
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*Prosopocoilus duplodentatus* sp. n.  
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*Pseudodorcus* see *Dorcus*.

*Pseudorhaetus* see *Dorcus*.

*Pycnosiphorus* Solier (= *Epipedus*  
Sol. preocc.) scope p. 139, ARROW  
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*Rhaetulus* see *Dorcus*.

*Rhaetus* see *Dorcus*.

*Sclerognathus* see *Scortizus*.

*Sclerostomus* see *Scortizus*.

*Scortizus* Westw. (= *Sclerostomus*  
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12.

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*Xenostomus* see *Aegus*.

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*Coenonycha* revision 27 pp., characters p. 7, key to spp. p. 10; *fuga* (CAZIER) p. 12, *purshiae* (C.) p. 13, *ampla* (C.) p. 14, *hageni* (C.), *acuta* (C.) p. 15, *pallida* (C.) p. 18, *lurida* (C.), *barri* (C.) p. 19, *saylori* (C.), *bowlesi* (C.) p. 20, *mediata* (C.), *rubida* (McCLAY) p. 21, *scotti* (M.), *clypeata* (M.) p. 22, *fulva* (M.) p. 23, *fusca* (M.), *utahensis* (M.) p. 24, *globosa* (M.) p. 25, *crispata* (M.) p. 26, *ovatis* (M.) p. 27 spp. n. U.S.A. figs., CAZIER & McCLAY Amer. Mus. Novit. no. 1239.

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*tridens* Sharp (= *amoena* Felsche); *discedens* Sharp (= *haasei* Nonfr.); *lepida* Kirsch prob. synonym of *pumila* Sharp; *squamuligera* Kirsch, *nigricollis* Kirsch from *Lachnosterna*; *leonina* Sierra Leone p. 775, *agilis* Gold Coast, *nicobarica* Nicobar Is. p. 776, *insularum* Nicobar and Andaman Is. p. 777, *peninsularis* Perak, Penang p. 778 spp. n., ARROW Ann. Mag. n. H. (11) 10.

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*Tetropium castaneum* var. n. *vestitum* Russia pp. 32, 620; *aquilonium* sp. n. Kola Penin., Siberia etc. pp. 37, 622 figs., PLAVIL'-SHCHIKOV Fn. de l'URSS (N.S.) 22 1940.

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*Biareolina neglecta* Dours designated type p. 530, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Bombus* (subgen. n. *Mastrucatorobombus* p. 66), KRÜGER Ent. Mitt. 6 1917.—*B. variabilis* colour variations pp. 276–386 figs., KRÜGER Z. Morph. Oekol. Tiere 37 1940.—*B.* subgen. *Agrobombus* (*agrorum* F. designated type) p. 523; *Chromobombus* (*muscorum* L. designated type) p. 538; *Diversobombus* (*diversus* Smith designated type) p. 546; *Hortobombus* (*hortorum* L. designated type) p. 559; *Leucobombus* (*terrestris* L. designated type) p. 564; *Melanobombus* D.T. (= *Lapidariobombus* Vogt) (*lapidarius* L. designated type) pp. 562, 569; *Mendacibombus* (*mendax* Gerst. designated type) p. 572; *Mucidobombus* (*mucidos* Gerst. designated type) p. 574; *Poecilobombus* (*sitkensis* Nyl. designated type) p. 589; *Rhodobombus* D.T. (= *Pomobombus* Krüg.) (*pomorum* Panz. designated type) pp. 589–596; *Sibiricobombus* (*sibiricus* F. designated type) p. 599; *Confusibombus* Ball (= *Sulcobombus* Krüg.), (*confusus* Schenck designated type) p. 602; *Thoracobombus* (*sylvorum* L. designated type) p. 604, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Brachyglossula* Hed. (= *Pasiphae* Spin. nec Latr.) pp. 531, 585, SANDHOUSE t.c.

*Brachynomada argentina* Holmb. designated type p. 531, SANDHOUSE t.c.

*Bremus agrorum* F. designated type p. 532, SANDHOUSE t.c.

*Cacosoma discolor* Smith designated type p. 532, SANDHOUSE t.c.

*Cadeguala occidentalis* Hal. designated type p. 532, SANDHOUSE t.c.

*Campanularia* subgen. n. see *Prosopis* (*Paraprosopis*).

*Camptopoeum* (subgen. *Liopoeum* *hirsutulum* Spin. designated type p. 564), SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.



*Caupolicana gayi* Spin. designated type p. 534, SANDHOUSE t.c.

*Centris nigerrima* var. n. *orellanai* Chile p. 335, RUIZ P[ÉREZ] Rev. chil. H. n. 44 1940.—*C. minuta* Mocs. (= *labrosa simplex* Friese); *labrosa* Fr. a var. of *minuta* p. 305; *chera* sp. n. Brazil p. 306, MOURE Papéis avulsos Dep. Zool. São Paulo 2 1942.—*C. versicolor* F. designated type of subgen. *Cyano-centris* p. 543; *atra* Friese designated type of subgen. *Melanocentris* p. 569, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Cephalictoides* subgen. n. (type *paradoxus* Mor.) see *Halictoides*.

*Ceratias* see *Sayapis*.

*Ceratina stilbonota* p. 73, *tropidura* p. 76, spp. n. Brazil, MOURE Arq. Mus. Paranaense 1 1941.—*C. aenescens* and other spp. see *Ceratinula*.

*Ceratinula* gen. n. for *Ceratina aenescens* Friese (type) and other spp. p. 78; *turgida* p. 80, *xanthocera* p. 81, *melanochroa* p. 82, *biguttulata* p. 83 Brazil, *tantilla* Argentina p. 81, spp. n., MOURE Arq. Mus. Paranaense 1 1941.

*Ceylonicola atra* Friese designated type p. 536, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Sudila bidentata*.

*Chilicola rubriventris* Spin. designated type p. 537, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Chloralictus* Rob. (= *Halictomorpha* Schrot.); *creusa* Schr. from *Tetrachlora*; *loureiroi* sp. n. Brazil p. 54, MOURE Arq. Mus. Paranaense 1 1941.

*Cingulata* subgen. n. see *Prosopis* (P.).

*Colletes* (subgen. n. *Ptilopoda* p. 83 (note)), FRIESE Stettin. ent. Ztg. 82 1921.—*C. (Policana subgen. n. [non descr.]* p. 651), FRIESE Zool. Jahrb., Syst., 29 1910.—*C. herbsti* Fr. designated type of subgen. *Policana* p. 589, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—*C. rufipes* p. 295, *petropolitani* p. 296 ♂♂, MOURE Papéis avulsos Dep. Zool. São Paulo 2 1942.—*C.* revision of Colorado and western U.S.A. spp. pp. 385–410, key p. 403; *andrewsi* ♂ p. 385; *paniscus* Vier. (= *oromontis* Vier., *griseus* Ckll.); *nigrifrons* Titus (= *florissantia* Ckll., *polemonii* Ckll.); *consors* Cress. (= *myroni* Ckll.)

p. 387; *spuricus* Vier. (= *cauponarius* Ckll., *nitidicaudus* Ckll.) p. 390; *kincaidii* Ckll. (= *sieverti* Ckll.) p. 393; *simulans* Cress. (= *bigeloviae* Ckll., *brevispinosus* Vier., *tegularis* Swenk, *coloradensis* Ckll.) p. 397; *nevadensis* Swenk (= *angelicus* Swenk nec Ckll.) a race of *simulans* p. 402; *gypsicolens* p. 400, *trisonensis* p. 402 ♀♀; *nudus* Roberts. (= *hydrophilus* Ckll.); *intermixtus* Swenk (= *lip-piarum* Ckll.) p. 399; *lutzi* p. 390, *wickhami* p. 394, *brevihirtus* p. 395, *truncatus* p. 396, *apacheorum* p. 401 spp. n. U.S.A. figs., TIMBERLAKE Bull. Amer. Mus. n. H. 81.—*C. kiruicola* sp. n. Belg. Congo p. 571, COCKERELL Ann. Mag. n. H. (11) 10.

*Corynogaster gayi* Spin. designated type p. 540, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Corynura*.

*Corynura* Spin. (= *Corynogaster* Sichel p. 540, *Manuelia* Vach. p. 567), *gayi* Spin. designated type p. 540, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Corynuroides* n. n. for *Corynuropsis* Ckll. nec Scott p. 540, SANDHOUSE t.c.

*Corynuropsis* see *Corynuroides*.

*Crocisa pentalon* see *Melecta*.

*Crocissa* Panz., *scutellaris* F. designated type p. 541, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Thyreus*.

*Ctenoapis lutea* Cam. designated type p. 542, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Ctenoplectra* Kby. (= *Ctenoplectra* Smith), *chalybea* Smith designated type p. 542, SANDHOUSE t.c.

*Ctenopoda* see *Baana*.

*Dasyglossa flavescens* Klug designated type p. 544, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Oxaea*.

*Dentigera* subgen. n. see *Prosopis*.

*Dialictus* Rob. (= *Gastrohalictus* Ducke) p. 54, MOURE Arq. Mus. Paranaense 1 1941.

*Dianthidium* key to ♀♀ of Nearctic spp. p. 72; *subrufulum* p. 78, *desertorum* p. 84, *fraternum* p. 92 (with subsp. n. *hirtulum* p. 94), *plenum* p. 105 (with subspp. n. *williamsi* p. 107, *convictorum*, *australe* p. 108), *macswaini* p. 109 spp. n.; *ulkei* subsp. n.

*reductum* p. 82; *platyurum* subsp. n. *mohavense* p. 87; *parvum* subsp. n. *schwarzi* p. 96, *basingeri* p. 97; *rudicum* subsp. n. *decorum* p. 100, *ingoense* p. 101; *consimile* subsp. n. *macrackenae* p. 104 U.S.A.; *platyurum* and *r. baculifrons* Ckll. (= *riparii* Schw.) distinct sp. pp. 85, 87; *subparvum* var. *suenki* re-description p. 91, TIMBERLAKE J.N.Y. ent. Soc. 51.—D. (= *Protoanthidium* Cameron) p. 367, COCKERELL Ann. Mag. n. H. (9) 9 1922.

*Dichroa gibba* L. designated type p. 545, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Sphecodes*.

*Energoponus plumatus* Smith (= *strenuus* Holmb.) designated type p. 547, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Pilothrix*.

*Eremosmia* subgen. n. (type *robustula* Ckll.) see *Anthocopa*.

*Eufriesea* n. n. for *Eumorpha* Friese nec Hb. p. 41 (note), COCKERELL Psyche 15 1908.

*Eumorpha* see *Eufriesea*.

*Eunomioides* subgen. n. (type *variata* Ol.) see *Nomioides*.

*Euryapis* n. n. for *Orbitella* Ma nec Douv. p. 551, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Fasciata* subgen. n. see *Prosopis*.

*Fascista* see *Prosopis* (*Fasciata*).

*Gastrohalictus* see *Dialictus*.

*Glossosmia* subgen. n. (type *singularis* Mor.) see *Anthocopa*.

*Glyptobasia* n. n. for *Glyptobasis* Moure nec McL. p. 98, MOURE Arq. Mus. Paranaense 1 1941.

*Glyptobasis* see *Glyptobasia*.

*Gnathocera* see *Sayapis*.

*Gnathopasites* revision of N. American spp. pp. 141–149, keys to spp. pp. 142, 146; (*G.*) *sierrae* p. 144, (*Micropasites*) *timberlakei* p. 147, (*M.*) *mojavensis* p. 148 spp. n. California; (*G.*) *fulviventris* p. 143, (*M.*) *cressoni* p. 146 ♀♀ fig., LINSLEY Trans. Amer. ent. Soc. 69.

*Habralictus* gen. n. for *Augochlora callichroma* Ckll. and some spp. of *Halticus* p. 59; *flavopictus* (type) p. 62, *canaliculatus* p. 64, *chlorobaptus* p. 65, *macrospilophorus* p. 66, *orites* p. 68 spp. n. Brazil, MOURE Arq. Mus. Paranaense 1 1941.

*Hackeriapis* subgen. n. (type *rhodura* Cockerell) see *Megachile*.

*Halictoides* (subgen. n. *Cephalictoides* p. 244), COCKERELL Psyche 31 1924.

*Halictomorpha* see *Chloralictus*.

*Halictus* (subgen. n. *Homalictus* p. 13), COCKERELL Philipp. J. Sci. 15 1919.—*H.* (subgen. *Lucasius* Dours nec Kin.) *clavipes* Dours designated type and a synonym of *H. (Lucasiellus)* p. 566, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—*H. anomalipennis* p. 208, *botanicorum* p. 209, *semiplicatus* p. 210 Cape Province, *natalicus*, *lucidibasis* Natal p. 211 spp. n.; *pallidipennis* description of a var. p. 211, COCKERELL Ann. Mag. n. H. (11) 10.—*H. pulchrilucens* n. n. for *pulchriniensis* Ckll. preocc. p. 56, COCKERELL Entomologist 76.—*H. palumbes* see *Paragapostemon*; some spp. see *Habralictus*.

*Herbstiella* see *Kelita*.

*Heterapis* see *Heterapoides*.

*Heterapoides* n. n. for *Heterapis* Ckll. nec Linston p. 557, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Heterocentris* Ckll. (= *Rhodocentris* Friese) pp. 558, 596, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Heterorhiza* subgen. n. (type *melanura* Ckll.) see *Palaeorhiza*.

*Hexosmia* subgen. n. (type *copelandica* Ckll.) see *Anthocopa*.

*Homalictus* subgen. n. (type *taclobanensis* Ckll.) see *Halictus*.

*Hylaeus joergenseni* ♂ p. 292; *alampes* sp. n. Brazil p. 293; *brachyceratomerus* Moure from *Prosopis* p. 295, MOURE Papéis avulsos Dep. Zool. São Paulo 2 1942.—*H. F.* 1793 permanently rejected p. 28, Bull. zool. Nomencl. 1.

*Imperfecta* subgen. n. see *Prosopis* (*Dentigera* and *Nesoprosopis*).

*Kallobombus* D.T. (= *Soroceensibombus* Vogt) *soroceensis* F. designated type p. 561, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Kelita* n. n. for *Herbstiella* Friese nec Stim. p. 561, SANDHOUSE t.c.

*Kirbya* Lep. nec R.-D., *tricincta* Kby. designated type p. 561, SANDHOUSE t.c.—See *Melitta*.

*Koptortosoma gabonica* Grib. designated type p. 561, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Kozlovibombus kozlovi* Skor. designated type p. 561, SANDHOUSE t.c.

*Lambdopsis* subgen. n. (type *annularis* Kby.) see *Prosopis*.

*Liothyrapis* Ckll. (= *Paracoelioxys* Radoszk.) pp. 564, 583, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Lithosmia platycera* Gerst. designated type p. 565, SANDHOUSE t.c.—See *Arctosmia*.

*Lucasiellus* n. n. for *Lucasius* Dours nec Kinahan p. 272 (note), COCKERELL Entomologist 38 1905.

*Lucasius* see *Lucasiellus*.

*Manuelia gayi* Spin. designated type p. 567, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Corynura*.

*Mastrucatobombus* subgen. n. (type *mastrucatus* Gerst.) see *Bombus*.

*Megachile* (subgen. n. *Hackeriapis* p. 267), COCKERELL Ann. Mag. n. H. (9) 10 1922.—*M. chrysognatha* sp. n. S.W. Africa p. 575, COCKERELL op. cit. (11) 10.—*M. lentifera* Vach. (= *limae* Schrot.); *friesei* Schr. (= *helicitarus* Schr.) p. 92; *curvipes* Smith (= *fossoris* Sm., *leucocentra* Schr.); *laminula* Vach. (= *pseudocoelioxys* Schr.) p. 93; *ypiranguensis* Schr. (= *melochiae* Schr.); *paulistana* characters; *lachnopyga* sp. n. p. 94 (with var. n. *langei*) Brazil; *egressa* ♀ p. 96, MOURE Arq. Mus. Paranaense 1 1941.—*M. paranensis* Schrot. (= *beniensis* Ckll.) p. 308; *trigonaspis* Schrot. (= *egressa* Mitch.) p. 311, MOURE Papéis avulsos Dep. Zool. São Paulo 2 1942.—*M. (Argyropile* key to ♀♀ p. 16) *asterae* p. 13, (A.) *rossi* p. 14, spp. n. U.S.A., MITCHELL Pan-Pacif. Ent. 19.

*Mehelya* subgen. n. see *Prosopis* and *P. (Mehelyana)*.

*Mehelyana* n. n. for *Mehelya* Popov nec Csiki see *Prosopis*.

*Melea* n. n. for *Anthemoessa* Rob. nec Agass. p. 569, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Melecta* (M.) *atlantica* sp. n. U.S.A. p. 225; (*Melectomorpha*) *pentalon* Dew. from *Crocisa*, re-description p. 226, LINSLEY J.N.Y. ent. Soc. 51.

*Meliponorytes succini* Tosi designated type p. 570, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Melissa azurea* L. & S. designated type p. 570, SANDHOUSE t.c.—See *Mesophia*.

*Melissodes belophora* sp. n. Brazil p. 83, MOURE Arq. Mus. Paranaense 1 1941.

*Melitta* Kby. (= *Kirbya* Lep.) pp. 561, 571, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Mesophia* Lep. (= *Melissa* Smith) pp. 570, 573, SANDHOUSE t.c.

*Navicularia* subgen. n. see *Prosopis*.

*Neopasites* revision of N. American spp. pp. 119–140; keys to subgen. p. 120, to spp. of subgen. *Neopasites* p. 123; (N.) *minimus* p. 126, (N.) *carinatus* p. 127, (N.) *punctulatus* p. 135, (N.) *calliopsidis* p. 137 spp. n.; (N.) *robertsoni* subsp. n. *pubescens* p. 131 U.S.A.; (N.) *haematurus* p. 128, (N.) *heliopsis* p. 129 ♀♀ fig., LINSLEY Trans. Amer. ent. Soc. 69.

*Neoscirtetica* n. n. for *Scirtetica* Holmb. nec Sauss. p. 256, SCHROTTKY An. Soc. cient. argent. 75 1913.

*Nomia heterura* re-description p. 65; *crassicauda*, *megastigma* p. 67, *rufotecta* p. 70, *lengana* p. 71 Liberia, *kabarica* Belg. Congo p. 68, *robustula* Zululand p. 69, *rufosignata* p. 101, *pallidiventer* p. 102 Nyasaland, *mediolucens* p. 103, *nigroapicata* p. 104, *nubipennis* p. 369, *lubumbashica* p. 370 Belg. Congo, *moalana* Liberia p. 104, *marshalli* S. Rhodesia p. 212, *faurei* p. 213, *niveocincta* p. 370 Transvaal, *cincticauda* Katanga p. 214, *kampolicola* p. 215, *guluensis* p. 376 Uganda, *robustior* Sudan p. 216, *pyrrhonota* p. 368, *subarmata* p. 373 (with subsp. n. *kasoutina* p. 374) Br. E. Africa, *asclepiadis* p. 371, *pulchricornis*, *claricincta* p. 372 Orange Free State spp. n.; *heterura* subsp. n. *subscrudelis* Belg. Congo p. 214; *armatula* var. n. *yapiensis* Gold Coast p. 374; *swalei* ♀ p. 369; *rothkirchi* Friese a race of *patellifera* Westw. p. 375; *meridionalis* Fr. (= *silverlocki* Ckll. ♀) p. 376; *sessensis* p. 572, *ankolensis* Uganda, *stordyi* Abyssinia p. 573, *kolana* Portuguese E. Africa p. 574, spp. n., COCKERELL Ann. Mag. n. H. (11) 10.



*Nomioides* (subgen. n. *Eunomioides* p. 3), BLÜTHGEN Comment. biol. Soc. sci. fennica 6 no. 11 1937.

*Nyctomelitta* subgen. n. (type *tranquebarica* F.) see *Xylocopa*.

*Odontochlora dolichocephala* p. 43, *cephalica* p. 46 spp. n. Brazil; *cupricollis* Friese from *Augochlora* p. 48; *cydippe* ♀ re-description p. 50, MOURE Arq. Mus. Paranaense 1 1941.

*Orbitella* see *Euryapis*.

*Osiris pallidus* Smith designated type p. 580, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Osmia* (subgen. *Megalosmia*, *grandis* Moraw. designated type p. 568), SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Othinosmia* subgen. n. (type *moniliferum* Ckll.) see *Anthocopa*.

*Oraxa* Klug (= *Dasyglossa* Ill.) pp. 544, 580, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Oxytrigona* subgen. n. (type *mediorufa* Ckll.) see *Trigona*.

*Palaeorhiza* (subgen. n. *Heterorhiza* p. 316), COCKERELL Mem. Qd Mus. 9 1929.

*Paracoelioxys barrei* Radoszk. designated type p. 583, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Liothyrapis*.

*Paragapostemon* characters; *beatis-simus* Ckll. from *Augochlora* p. 60; *palumbes* Vach. from *Halictus* p. 70, MOURE Arq. Mus. Paranaense 1 1941.

*Paramegilla ireos* Pall. designated type p. 584, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Paranomada* revision of N. American spp. pp. 103–106, key to spp. p. 104; *velutina* ♀ p. 105 figs., LINSLEY Trans. Amer. ent. Soc. 69.

*Paraprosopis* subgen. n. see *Prosopis*.

*Parasphecodes* (*Aphalictus* subgen. n. p. 40), COCKERELL Mem. Qd Mus. 10 1930.—*P. hilactus* Smith designated type p. 585, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Paratetrapedia pygmaea* Schrott. from *Tetrapedia* p. 301, ♀ p. 303, MOURE Papéis avulsos Dep. Zool. São Paulo 2 1942.

*Parepeolus lecointei* Ducke designated type p. 585, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Parevaspis basalis* Ritsema designated type p. 585, SANDHOUSE t.c.

*Pasiphae* Spin. nec Latr. *caeruleascens* Spin. designated type p. 585, SANDHOUSE t.c.—See *Brachyglossula*.

*Pectinata* subgen. n. see *Prosopis* (*Hylaeus*).

*Phaeosmia* subgen. n. (type *enceliae* Ckll.) see *Anthocopa*.

*Podalirius andinensis* sp. n. [nom. nud.] Chile p. 319, RUIZ PÉREZ Rev. chil. n. H. 44 1940.—*P.* Latr. 1802 permanently rejected p. 28, Bull. zool. Nomencl. 1.

*Poecilocentris fasciatella* Friese designated type p. 589, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Poecilomelitta flavida* Friese designated type p. 589, SANDHOUSE t.c.

*Policana* subgen. n. see *Colletes*.

*Polyglossa albitarsis* Friese designated type p. 589, SANDHOUSE t.c.

*Prosopis* F. [1804–05] permanently rejected p. 28, Bull. zool. Nomencl. 1.

*Prosopis* Jur. 1807 placed on official list (type *signata* Panz.) p. 29, Bull. zool. Nomencl. 1.—*P.* subgen. n. *Abrupta* pp. 32, 137, *Barbata* pp. 32, 135, *Dentigera* pp. 45, 151, *Lambdopsis* pp. 65, 171, *Pseudobranchiata* pp. 33, 139, *Navicularia* pp. 34, 140, *Auricularia* pp. 41, 147, *Fasciata* pp. 44, 140, *Cingulata* pp. 43, 149, *Imperfecta* pp. 48, 154, *Campanularia* pp. 50, 157, *Pectinata* pp. 54, 161, *Trichota* pp. 63, 169, *Spatularia* pp. 69, 175, MÉHELY Naturg. Urbienen, Budapest 1935 [not seen].—*P.* subgen. n. *Abrupta* Méh. *cornuta* Sm. designated type; *Mehelya* n. n. for subgen. *Barbata* Méh. nec Humph. (type *friesei* Alf.) p. 167; *Koptogaster* Alf. (= *Pseudobranchiata* Méh.) *bifasciata* Jur. designated type; *Navicularia* Méh. *variegata* F. designated type; *Prosopis* (= *Auricularia* Méh. nec Blainv., *Cingulata* Méh., *Fasciata* [err. for *Fasciata*] Méh.); *Dentigera* Méh. (= *Imperfecta* Méh. part); *brevicornis* Nyl. designated type *Nesoprosopis* Perk. (= *Imperfecta* Méh. part) *facialis* Sm. designated type p. 168; *Paraprosopis* n. n. for



subgen. *Campanularia* Méh. nec Lam. (*pectipes* Nyl. designated type); *Hylaeus* F. [*Nylaeus* in err.] (= *Pectinata* Méh., *Trichota* Méh. (*annulata* L. designated type)); *Lambdopsis* Méh. *annularis* Kby. designated type; *Spatulariella* n. n. for subgen. *Spatularia* Méh. nec van Dev. (*hyalinata* Sm. designated type) p. 169, POPOV C.R. Acad. Sci. URSS 25 1939.—*P.* subgen. *Mehelyana* n. n. for *Mehelya* Popov nec Csiki p. 569, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—*P. brachyceratomera* sp. n. Brazil p. 41, MOURE Arq. Mus. Paranaense 1 1941.—*P. brachyceratomera* see *Hylaeus*.

*Protandrena maurula* Ckll. designated type p. 591, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Protoanthidium* gen. n. [non descr.] p. 125, CAMERON J. Straits Br. Asiat. Soc. 37 1902.—*P. rufobalteatum* Cam. designated type p. 591, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.—See *Dianthidium*.

*Protomelissa iridescens* Friese designated type p. 592, SANDHOUSE t.c.

*Protopia glutinosus* Gir. designated type p. 592, SANDHOUSE t.c.

*Psaenythia philanthoides* Gerst. designated type p. 592, SANDHOUSE t.c.

*Pseudaugochloropsis sthena* Schr. designated type p. 593, SANDHOUSE t.c.

*Pseudoanthidium alpinum* Moraw. designated type p. 593, SANDHOUSE t.c.

*Pseudobranchiata* subgen. n. see *Prosopis* (*Koptogaster*).

*Pseudodichroa capensis* Friese designated type p. 593, SANDHOUSE Proc. U.S. nat. Mus. 92 no. 3156.

*Pseudomelecta diacantha* Ev. designated type p. 594, SANDHOUSE t.c.

*Pseudopasites* subgen. n. see *Sphecodopsis*.

*Ptilopoda* subgen. n. (type *maculipennis* Friese) see *Colletes*.

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*Spatulariella* subgen. n. n. see *Prosopis*.

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*Apiraptria* see *Cerceris* (*Bucerceris*).

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*Aporina* see *Psen* (*Mimesa*).

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*Tachynana* subgen. n. (type *obscurus* Cress.) see *Tachytes*.

*Tachyoides* gen. n. for *Tachytes mergus* Fox (type) (= *obscuranus* Rohw.) pp. 397, 434; *ariella* sp. n. Arizona p. 434, BANKS Bull. Mus. comp. Zool. Harv. 89 1942.

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*Rhopalosoma* family status discussed p. 310, key to spp. p. 312; *nearcticum* Florida, *bolivianum* Bolivia p. 316, *simile* Panama, Venezuela etc. p. 317 spp. n. figs., BRUES Ann. ent. Soc. Amer. 36.

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*Gymnopolybia vulgaris* Ducke designated type, characters p. 45, key to spp. p. 47; *cornelliana* sp. n. Peru p. 48 (with var. n. *baezae* Ecuador p. 49)

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*Myrmecina grammicicola* varr. n. *atlantis*, *dentata* N. Africa p. 77, SANTSCHI t.c.

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### SCELIONIDAE (including PLATYGASTERIDAE).

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*Microphanurus* key to some African and Indo-Malayan spp. p. 136; *striaticus* Dodd (= *carinifrons* Fouts) p. 139; *biblis* S. Africa p. 140, *larides* W. Africa spp. n.; *alloysii-sabaudiae* Fouts (= *artabazus* Nixon) p. 141, NIXON Bull. ent. Res. 34.—*M. esakii* sp. n. Marianne Is. in pp. 70–83 figs., YASUMATSU Trans. n. H. Soc. Formosa 31 1941 [not seen].—*M. lemoleae*, *mahensis* see *Telenomus*.

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*Serphus* Schr. 1780 permanently rejected p. 28, Bull. zool. Nomencl. 1.



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Brief introduction to the study of Chalcids, DOUBLEDAY Proc. Trans. S. Lond. ent. n. H. Soc. 1942-43 pt. 2 pp. 56-66.

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*Callimome* Spin. 1811 permanently rejected p. 28, Bull. zool. Nomencl. 1.

*Misocampe* Latr. 1818 permanently rejected p. 28, Bull. Zool. Nomencl. 1.

*Torymus* Dalm. 1820 placed on official list, type *bedeguaris* L. p. 29, Bull. zool. Nomencl. 1.

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*Metaphycus psyllidis* sp. n. California p. 72, COMPERE Pan-Pacif. Ent. 19.

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*Epomphaloides* see *Tetrastichus*.

*Hyperteles neuroteri* see *Tetrastichus*; *floci* see *T. racemariae*.

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*Neotetrastichus* see *Tetrastichus*.

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*Sympiesis* revision of Palaearctic spp.; *sericeicornis*, *laticornis*, *punctipleura*, *feketii*, *nowickii* valid spp.; *szelenyii* sp. n. [? Austria] in pp. 122-134, GYÖRFI Erdészeti Kiserletek 43 1941 [not seen].

*Tetrastichodes chrysopae* see *Tetrastichus*; *browni* see *T. hagenowii*.

*Tetrastichus* Hal. revision of N. American spp. pp. 505-608, key p. 510, host list p. 599, (= *Neotetrastichus* Perk., *Epitetrastichus* Gir., *Neomphaloidella* Gir., *Neotetrastichodes* Gir., *Epomphaloides* Gir., *Aprostoceroloides* Gir., *Blattotetrastichus* Gir.) p. 509; *chrysopae* Crwf. (= *Aprostoceroloides annapolis* Gir.) from *Tetrastichodes* p. 525; *thripophonus* Wtstn. (= *tatei* Doz.) p. 525; *lissus* p. 527, *ichthyus* p. 528, *melanis* p. 529, *pandora* p. 530, *solidaginis* p. 534, *gelastus* p. 539, *baldusi* p. 540, *dyrus* p. 541, *triozae* p. 542, *scriptus* p. 550, *paracholus* p. 551, *tesserus* p. 552, *cassidis* p. 555, *argyrus* p. 558, *phegus* p. 559, *gigas* p. 560,

*spilopteris* p. 564, *carpatas* p. 566, *strobilus* p. 570, *cornus* p. 579, *faustus*, *hibus* p. 582, *malophilus* p. 585 spp. n. U.S.A.; *lasius* n. n. for *lasiopterae* Ashm. nec Lind. p. 596; *flora* Gir. (= *Epitetrastichus tricolor* Gir.) p. 533, *whitmani* Gir. (= *marilandicus* Gir.) p. 538 from *Aprostocetus*; *hillmeadia* Gir. p. 534, *gibboni* Gir. p. 574 from *Ootetrastichus*; *pulchrivertris* Gir. p. 535, *semilongifasciatus* p. 536, *fumi-pennis* Gir. p. 553, *oklahoma* Gir. p. 557, *nebraskensis* Gir. p. 594 from *Neoamphaloidella*; *ainslei* Gah. (= *N. mediogutta* Gir.) p. 537; *aeneoviridis* Gir. from *Trichaporus* p. 547; *hagenowii* Ratz. (= *Tetrastichodes browni* Ashm.) p. 554; *semiauraticeps* Gir. p. 556, *punctatifrons* Gir. p. 572, *varicornis* Gir. p. 592 from *Epitetrastichus*; *longicarpus* Gir. from *Neotetrastichodes* p. 557; *modestus* How. (= *Epitetrastichus mundicornis* Gir.) p. 562; *caerulescens* Ashm. (= *doteni* Crwf.) p. 568; *polynemae* Ashm. (= *Ootetrastichus mymaridis* Gir.) p. 575; *racemariae* Ashm. (= *californicus* Ashm., *Hyperteles flocci* Ashm.) p. 578; *minutus* How. (= *lecanii* Ashm., *blepyri* Ashm.) p. 580; *neuroteri* Ashm. from *Hyperteles* p. 592; *marylandensis* Gir. (= *Epitetrastichus cuneiformis* Gir.) p. 598; *centricolae* Ashm. from *Baryscapus* p. 603; *flavopictus* Ashm. from *Ceraninus* p. 604 figs., BURKS Proc. U.S. nat. Mus. 93 no. 3170.

*Trichaporus aeneoviridis* see *Tetrastichus*.

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*Rhodites dispar* sp. n. England p. 38, NIBLETT Entomologist 76.

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Notes on British spp. of Adelnathini, PERKINS Trans. R. ent. Soc. Lond. 93 pp. 95-114, 17 figs.

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*Clistopyga rufescens* see *Zaglyptus*.

*Cryptus* F. [1804-05] placed on official list (type *viduarius* F.) pp. 27, 28, Bull. zool. Nomencl. 1.

*Ephialtes* Schr. 1802 permanently rejected p. 28, Bull. zool. Nomencl. 1.

*Ephialtes* Grav. 1829 placed on official list (type *manifestator* L.) p. 29, Bull. zool. Nomencl. 1.—*E.* preliminary notes on synonymy of European spp. pp. 249-273; *mesocentrus* Grav. (= *insignis* Haberm., *manifestator* var. 1 Grav.); *atratus* Rud. (= *macrocentrus* Kriechb., *reflexus* Morl.) p. 255; *dux* Tschek (= *crassiceps* Thoms.); *scutellaris* Thoms. (= *atricoxatus* Strobl); *tuberculatus* Fourc. (= *parallelus* Thoms., *pfefferi* Haberm.) p. 256; *populneus* Ratz. (= *abbreviatus* Thoms.); *messor* Grav. (= *continuus* Ratz., *pusillus* Ratz., *reissigii* Ratz., *heteropus* Thoms.) p. 257; *crassisetia* Thoms. (= *pleuralis* Thoms., *musculus* Haberm., *fovelatus* Ulbr.) p. 258; *longiseta* Ratz. (= *haemorrhoidalis* Tschek, *pubescens* Hell.) p. 259; *roborator* F. (= *Pimpla flavipennis* Rud., *P. nodosa* R., *P. brachycera* Thoms., *P. punctata* T., *P. roborator* varr. 1 and 2 Grav., *P. brevicornis* var. 2 Grav.); *ruficollis* Grav. (= *P. variegata* Ratz.) p. 262; *cicatricosus* Ratz., *dilutus* Ratz. p. 261, *rufipleura* Bign. p. 262, *arundinator* F. (= *P. nitida* Brauns), *similis* Bridg. (= *P. kriechbaumeri* Haberm., *habermehli* Schm.) p. 263, *stercorator* F. (= *P. mussii* Htg.) p. 264, *bernuthii* Htg., *pomorum* Ratz. p. 265, *brunneus* Br. (= *P. graminellae* var. 3 Grav., *P. inanis* Schr.), *melanopyga* Grav. (= *P. erythrosoma* Rud., *P. cultrator* Morl.), *calobatus* Grav., *nucum* Ratz. (= *P. stercorator* var. 4 Grav., *brevicornis* Grav., Thoms. nec Grav.) p. 266, *detritus* Hlmgr. (= *P. nigricoxis* Ulbr.), *pictipes* Grav., *planatus* Htg. (= *P. ventricosa* Tschek), *didymus* Grav., *vesicarius* Ratz. (= *P. gallicola* Gir., *P. brevicornis* var. *rhénana* Ulbr., *P. morleyi* Schm.), *buoliana* Htg. (= *P. stercorator* varr. 1 and 2 Grav.) p. 267, *inquisitor* Scop., *signatus* Pfeff., *cincticarpus* Kriech. (= *P. affinis* Haberm.), *nigricans* Thoms. (= *P. robusta* Morl.), *brevicornis* Grav. (= *P. punctiventris* Thoms., *P. euphrantae* Schm.), *sagax* Htg. (= *P. brevicornis* var. 1 Grav., *P. linearis* Ratz., *P. atrocoxata* Pfeff., *E. geniculatus* var. *suecicus* Rom.) p. 268, *elegans* Wldst. (= *P. ulicicida* Morl.) p. 269 from *Pimpla*; *diversicostae* p.

256, *subglabratus*, *curticornis* p. 258 spp. n. Europe, PERKINS Ann. Mag. n. H. (11) 10.—*E. balanini* see *Tromatobia oculatoria*.

*Exenterus* emended key p. 170; *affinis* ♂; *walleyi* Ontario p. 171, *platypes* Minnesota, Canada spp. n.; *diprionis* ♀; *canadensis* Prov. (= *flavissimus* Cush.); *amictorius* Panz. (= *marginatorius* F. nec Rossi) p. 173 figs., CUSHMAN Canad. Ent. 75.

*Ichneumon* L. 1758 placed on official list (type *extensorius* L.) p. 29, Bull. zool. Nomencl. 1.

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*Coeloides melanotus* see *Coeloidina*.

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*Cimbex* Oliv. 1790 placed on official list, *lutea* L. designated type, Opinion 144, Int. Comm. Zool. Nom.

*Diprion* Schr. 1802 placed on official list (type *pini* L.) pp. 27, 28, Bull. zool. Nomencl. 1.

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*Tethida* gen. n. for *Tenthredo cordigera* Beauv. p. 96, Ross Illinois biol. Monogr. 15 1937 no. 2.—*T. cordigera* Beauv. (= *bardus* Say) p. 118, DAVIAULT Ann. Acfas 9.

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*Tremex* key to ♂♂ and ♀♀ occurring in Europe p. 42, BENSON Bull. ent. Res. 34.—*T. smithi* and others see *Eriotremex*.

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*Euploea* F. 1807 placed on official list (type *corus* F.) pp. 21, 22, Bull. zool. Nomencl. 1.—*E.* key to Indo-Australian and African spp.; *algea* God. (= *duponcheli* Boisd.) oldest name for *swainsoni* complex; *lewini* Feld. (= *helcita* Boisd.); *redtenbacheri* Feld. (= *leachii* Feld.); *lapeyrousei* Boisd. (= *melanopa* Rüb.); *nubaida* Gr.-Sm. a race of *latifasciata* Weym.; *honestia* Btlr. a race of *batesii* Feld. p. 17, CORBET Proc. R. ent. Soc. Lond. (B) 12.—*E.* revision pp. 6-16; *redtenbacheri* Feld. (= *leachii* Feld.); *lacon*

*Grose*-Sm. (= *malaguna* Ribbe); *hisme* Boisd. (= *staintonii* Feld.); *lewini* Feld. (= *mathewi* Poult.) p. 7; *trimenii* Feld. (= *salabanda* Kirsch, *engrammelli* Mo.) p. 11; *helcita* Boisd. status discussed pp. 6, 12; *algea* God. (= *duponcheli* Boisd., *anthracina* Btlr., *lykoatis* Fruh.) p. 14; *lapeyrousei* Boisd. (= *melanopa* Rüb.) p. 15, TALBOT Proc. R. ent. Soc. Lond. (B) 12.

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*Antirrhaea* Boisd., *philoctetes* L. designated type p. 23, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Antirrhaea* Hb.

*Antirrhaea* Hb. (= *Antirrhaea* Boisd.) p. 23, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Argyronympha pulchra* Mathew designated type p. 23, HEMMING t.c.

*Calisto* revision pp. 1-6; *hysius* subsp. n. *batesi* Dominican Repub. p. 3; *obscura* sp. n. Haiti p. 5 figs., MICHENER Amer. Mus. Novit. no. 1236 (June).—*C. batesi* sp. n. p. 23; *pulchella* subsp. n. *darlingtoni* p. 28 Dominican Repub.; *hysius* subsp. n. *montana* p. 24; *confusa* subsp. n. *debarriera* p. 25 Haiti; *herophile* subsp. n. *parsoni* Cuba p. 26, CLENCH Psyche 50 (August).—*C. micheneri* n. n. for *batesi* Clench nec *hysius batesi* Mich.; notes on other spp. described by Clench & Michener p. 115, CLENCH t.c.

*Catargynnis* Rüb. (= *Pseudomaniola* Rüb.), *pholoë* Staud. designated type p. 23, HEMMING Proc. R. ent. Soc. Lond. (B) 12.



*Coenonympha tullia* subsp. n. *bosniae* p. 244, *elwesi* p. 249, *witimensis* p. 253, *sibirica* p. 254; *amaryllis* subsp. n. *emmonsi* p. 287, DAVENPORT Bull. Mus. comp. Zool. Harv. 87 1941 no. 4 [not seen].

*Dira jansei* p. 140, *clytus* p. 143, early stages figs., CLARK J. ent. Soc. sthn. Afr. 6.

*Elymnias* Hb., *jynx* Hb. designated type p. 24, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—*E. hypermnestra* discussion and list of forms in Malay Penin. pp. 117–119, CORBET Proc. R. ent. Soc. Lond. (B) 12.

*Elymniopsis phegea* F. designated type p. 24, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Erebia epiphron* subsp. n. *scotica* Scotland p. 105, COOKE Entomologist 76.

*Eretris decorata* Feld. designated type p. 24, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Hipparchia fagi* Scop. (= *Satyrus hermione* L.); *alia* Hoffm. (= *S. alcyone* S. & D.) p. 57; *fagi* and varr. p. 69, *syriaca* and varr. p. 70 distribution in Europe; *serrula* Fruh. p. 70, *ghigii* Tur., *cyprica* Staud. p. 71 varr. of *syriaca* not *fagi*, HEMMING Entomologist 76.

*Lymanopoda* revision of Ecuadorian spp. pp. 87–102, characters p. 87, key to spp. and ff. pp. 88, 90, 94; *hazelana* p. 89, *confusa* p. 99 spp. n. Ecuador figs., BROWN Ann. ent. Soc. Amer. 36.

*Manerebia cyclopina* Staud. designated type p. 24, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Melanargia larissa* early stages p. 621 fig., WILTSHIRE J. Bombay n. H. Soc. 43.

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*Pararge achine* distribution Sweden pp. 30–39, KJELLANDER Opusc. ent. Lund 8.

*Pierella* Westw. (= *Pieris* Hb.) p. 24, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Pieris* Hb., *dracontis* Hb. designated type p. 24, HEMMING t.c.—See *Pierella*.

*Pseudomaniola* Weymer, *euripides* Weym. designated type p. 25, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Pseudomaniola Röber*, *pholoë* Staud. designated type p. 23, HEMMING t.c.—See *Catargynnis*.

*Pseudosteroma pronophila* Feld. designated type p. 25, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Satyrus* Latr. 1810 placed on official list, *actaea* Esp. designated type, Opinion 142, Int. Comm. Zool. Nom.—*S. hermione* see *Hipparchia fagi*; *alcyone* see *H. alia*.

*Steremnia polyxo* Godm. & Salv. designated type p. 25, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Thiemeia phoronea* Dbl. designated type p. 25, HEMMING t.c.

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*Elymnotaenaris* gen. n. p. 411, FRUHSTORFER in Seitz Macrolep. Wild. (Engl. Edn.) 9 1911.—*E. bioculatus* Guér. designated type p. 25, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Taenaris*.

*Taenaris* Hb. (= *Elymnotaenaris* Fruh.) p. 25, HEMMING t.c.

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*Iphimedeia hercules* Dalm. designated type p. 25, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Morpho*.

*Morpho* F. (= *Iphimedeia* Fruh.) p. 25, HEMMING t.c.

#### BRASSOLIDAE.

*Aerodes* see *Caligo* Hb.

*Blepolepis* Rüb., *batea* Hb. designated type p. 25, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Opsiphanes*.

*Caligo* Hb. (= *Aerodes* Billb., *Pavonia* God.) p. 26, HEMMING t.c.

*Caligo* Bois., *sallei* Dbl. designated type p. 25, HEMMING t.c.—See *Opsiphanes*.

*Catoblepia xanthus* L. designated type p. 26, HEMMING t.c.

*Dynastor* Dbl. (= *Megastes* Bois.) p. 26, HEMMING t.c.



*Megastes darius* F. designated type p. 26, HEMMING t.c.—See *Dynastor*.

*Opsiphanes* Dbl. (= *Blepolenis* Röb., *Caligo* Boisd.) p. 25, HEMMING t.c.

*Pavonia idomeneus* L. designated type p. 26, HEMMING t.c.—See *Caligo* Hb.

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*Abananote* subgen. n. (type *Acraea abana* Hew.) see *Altinote*.

*Actinote* Hb. [1819] (type *thalia* L.) proposed suspension of rules respecting p. 85, Bull. zool. Nomencl. 1.

*Aglais urticae* broods pp. 188–189, SUTTON Entomologist 76.

*Altinote* gen. n. for *Heliconius neleus* Latr., (*Abananote* subgen. n.) p. 31; (*Altinote*) *brownorum* sp. n. Ecuador p. 32, POTTS Pan-Pacif. Ent. 19.

*Apatura* Hb., *bisaltide* Cram. designated type p. 26, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Doleschallia*.

*Argynnis* F. 1807 placed on official list (type *paphia* L.) pp. 21, 22, Bull. zool. Nomencl. 1.—*A. aglaja* L. discussion of name pp. 78–81, BLAIR Ent. mon. Mag. 79.—*A. callippe* Californian races pp. 400–425 maps, HOVANITZ Amer. Nat. 77.

*Argyreus* Scop. 1777 (type *niphe* L. 1767 (= *hyperbius* L. 1763)) not to replace *Argynnis* p. 21, Bull. zool. Nomencl. 1.

*Callidula* Hb. (= *Haematera* Dbl.) *pyrame* Hb. designated type p. 26, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Catonephele* Hb. (= *Epicalia* Dbl.), *eupalemaena* Hb. designated type and a synonym of *acontius* L. p. 27, HEMMING t.c.

*Childrena* n. n. for *Eudryas* Reuss nec Boisd. p. 30, HEMMING t.c.

*Cymothoe* Hb., *althea* Cram. designated type and a synonym of *caenis* Dru. p. 27, HEMMING t.c.

*Cynthia* F. 1807 (type *cardui* L.) not to have precedence over *Vanessa* p. 21, Bull. zool. Nomencl. 1.

*Cyrestis thyodamas formosana* ab. n. *horishana* Formosa in pp. 1–2 [in Japanese] figs., TANAKA Trans. Kansai ent. Soc. 8 1939 [original not seen].

*Doleschallia* Feld. (= *Apatura* Hb.) p. 26, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Epicalia* (of Dbl.) *antiochus* L. designated type and a synonym of *acontius* L.; (of Boisd.) *numilia* Cram. designated type p. 27, HEMMING t.c.—See *Catonephele*.

*Epiphile* Boisd., *epicaste* Hew. designated type and a synonym of *Epiphile* Dbl. p. 27, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Eudryas* see *Childrena*.

*Euptera* Staud., *sirene* Staud. designated type p. 27, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Eurhinia* Feld., *polynice* Cram. designated type p. 27, HEMMING t.c.—See *Rhinopalpa*.

*Euripus* see *Idrusia*.

*Euryphura* Staud., *porphyron* Ward designated type p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Euthalia* Hb. [1819] placed on official list (type *lubentina* Cram.) p. 22, Bull. zool. Nomencl. 1.—*E.* notes on and distribution of spp. of *cocytus* group pp. 7–10; *lepidea flora* f. n. *penerka* Perak p. 8; *cocyтина* subsp. n. *niasana* Nias I. p. 9; *cocytus* subsp. n. *sebonga* Assam p. 10 figs., TALBOT & CORBET Entomologist 76.—*E.* revision of Malayan spp. of *lubentina* group pp. 37–41, key p. 37; *amanda* subsp. n. *sulaensis* Sula Is. p. 38; *lubentina* subsp. n. *caudata* Sumatra p. 39; *adonia* subsp. n. *kangeana* Kangean Is. p. 41, TALBOT Proc. R. ent. Soc. Lond. (B) 12.

*Evena* Westw. (= *Jaera* Hb.) p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Haematera* see *Callidula*.

*Hamanumida* Hb. (= *Leucosticha* R. & J.) p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Helcyra hemina takamukui* ab. n. *obsoleta* Formosa in pp. 1–2 [in Japanese], TANAKA Trans. Kansai ent. Soc. 8 1939 [original not seen].

*Heliconius phyllis* ab. n. *alicia* Uruguay p. 6 fig., SCHWEIZER & KAY An. Mus. H. n. Montevideo (2) 5 1941 no. 2.—*H. neleus* see *Altinote*.

*Idrusia* n. n. for *Eurypus* Dby. nec *Eurypus* Kby. p. 206, CORBET Entomologist 76.

*Jaera* Hb., *crithea* Dru. designated type p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Evena*.

*Leucosticha* R. & J., *daedalus* F. designated type p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Hamanumida*.

*Megistanis* notes on and key to spp. pp. 278–281, FORBES Ent. News 53.

*Melitaea pseudathalia* subsp. n. *leponica* Switzerland p. 30, RÜTIMEYER Mitt. schweiz. ent. Ges. 19.—*M. ismeria* discussed p. 117, FORBES Ent. News 54.

*Mesoacidalia* c. *charlotta* discussion of name p. 46, BALFOUR-BROWNE Ent. mon. Mag. 79; pp. 78–81, BLAIR t.c.

*Morpho* Hb., *omphale* Hb. designated type p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Prepona*.

*Neptis* Hb., *emilia* Cram. designated type p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Vila*.

*Nessaea* Hb., *ancaea* L. designated type p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Palla* Hb. (= *Philognoma* Dby.) p. 29, HEMMING t.c.

*Panopea* Hb., *semire* Cram. designated type p. 28, HEMMING t.c.—See *Pseudacraea*.

*Philognoma* Dby., *decius* Cram. designated type p. 29, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Palla*.

*Phyllophasis* Blanch., *galanthis* Cram. designated type p. 29, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Siderone*.

*Precis* *lavinia* f. *genoveva* Cram. (= f. *zonatis* Feld.) p. 384, CARPENTER Ann. Carnegie Mus. 29.

*Prepona* Bois. (= *Morpho* Hb.) p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Pseudacraea* Westw. (= *Panopea* Hb.) p. 29, HEMMING t.c.—*P. lucretia expansa* f. n. *particolor* Nyasaland, N.E. Rhodesia, Portuguese E. Africa p. 167, TALBOT Entomologist 76.

*Rhinopalpa* Feld. (= *Eurhinia* Feld.) p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Siderone* Hb. (= *Phyllophasis* Blanch.) p. 29, HEMMING t.c.

*Symphaedra* Hb. [1819] (type *alcandra* Hb.) not to have precedence over *Euthalia* p. 22, Bull. zool. Nomencl. 1.

*Vanessa* F. 1807 (type *atalanta* L.) placed on official list pp. 21, 22, Bull. zool. Nomencl. 1.

*Vila* Kby. (= *Neptis* Hb.) p. 28, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

#### LIBYTHEIDAE.

*Libythea bachmanii*, *carinenta*, *terena*, *motya*, *fulvescens* see *Libytheana*.

*Libytheana* gen. n. for *Libythea bachmanii* Kirtl. (type), *carinenta* Cram., *terena* God., *motya* Hb., *fulvescens* Lathy; *carinenta* subsp. n. *mexicana* Mexico etc. p. 1 figs., MICHENER Amer. Mus. Novit. no. 1232.

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*Agnostogyna* Rüb., *pasiphaë* Cram. designated type p. 29, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Pandemos*.

*Amblygonia* Feld., *amarynthina* Feld. designated type p. 29, HEMMING Proc. R. ent. Soc. Lond. (B) 12.—See *Parcella*.

*Echenais* Hb. (= *Elaphrotis* Stich.) *alphaea* Hb. designated type and a synonym of *thelephus* Cram. p. 29, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Elaphrotis* see *Echenais*.

*Eurybia* Oken, *salome* Cram. designated type and a synonym of *Eurybia* Ill. p. 30, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Hamearis erycina* p. 7 (with f. n. *affinis* p. 8), *almironensis* p. 9, *ina*, *precaria* p. 10 (with ab. n. *similis* p. 11), spp. n., Uruguay figs., SCHWEIZER & KAY An. Mus. H. n. Montevideo (2) 5 1941 no. 2.

*Limnas* Hb. [1806] suppressed p. 22, Bull. zool. Nomencl. 1.

*Nymphidium* F. 1807 placed on official list (type *caricae* L.) p. 22, Bull. zool. Nomencl. 1.

*Pandemos* Hb. (= *Agnostogyna* Rüb.) p. 29, HEMMING Proc. R. ent. Soc. Lond. (B) 12.

*Parcella* Stich. (= *Amblygonia* Feld.)  
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CLENCH Psyche 49 1942 pp. 52-60.

*Agriades* Hb. [1819] (= *Latorina*  
Tutt 1909) suspension of rules, type  
*glandon* Prunner pp. 23, 24, Bull. zool.  
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*Axiocerses harpax* subsp. n. *piscatoris*  
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*Brephidium barbouri* sp. n. Bahama  
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*B. exilis* subsp. n. *thompsoni* Grand  
Cayman p. 392, CARPENTER Ann.  
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*Erora sanfordi* Dos Passos a race of  
*quaderna* p. 221, CLENCH J. N. Y. ent.  
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*Hemiargus filenus* Poey a race of  
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*Incisalia henrici* subsp. n. *turneri* p.  
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*Lycaeides* Hb. [1819] suspension of  
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*Polyommatus* Latr. 1804 suspension  
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*Colias* F. 1807 placed on official list, *hyale* L. designated type, Opinion 146, Int. Comm. Zool. Nom.—*C. chrysotheme* nomenclature of complex in N. America 4 pp.; *c. subsp. n. vitabunda* Canada p. 3, HOVANITZ Amer. Mus. Novit. no. 1240.—*C. croceus* var. *helice* broods pp. 46-48, BLAIR & HAWKINS

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*Dismorphia delia sp. n.* Uruguay p. 4 figs., SCHWEIZER & KAY An. Mus. H. n. Montevideo (2) 5 1941 no. 2.

*Dizeia* list of spp. p. 102, keys p. 105; *cebron* ♀ *ff. n. usitatus* Ivory Coast etc., *aurantiaca* Kamerun p. 107; *capricornus* ♂ *f. n. signata* Gold Coast, Ashanti, Ivory Coast; *orbona vidua* ♀ *ff. n. semialba* Kenya, *semiochracea* S.E. Congo, N. Rhodesia; *pigea* ♀ *ff. n. citreus* p. 108, *luteola* (also Rhodesia) Kenya, Tanganyika, Uganda, *lutescens* Uganda, *erubescens* Uganda, Kenya p. 109; *spilleri* ♀ *f. n. flavaiba* Kenya; *doxo venatus f. n. desertorum* Sudan; *d. liliana* dry season *f. n. transiens* p. 110, wet season *f. n. immaculata*, ♀ *f. n. ochreate* Kenya, Tanganyika, *subsp. n. costata* Kenya, Tanganyika Uganda p. 111, *parva* (with *f. n. inspersa*) Rhodesia p. 112, TALBOT Proc. R. ent. Soc. Lond. (B) 12.

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to spp. p. 47; (*Styria*, *Mimocalla* p. 46, *Therantha* p. 47 subgen. n.); *ebilis* p. 65, *cerberus* p. 66, *aeolus* p. 69, *zenilla*, *satyra* p. 77, *delicatula* p. 78 Ecuador, *flukeyi*, *thecla* p. 67, *pyxia* p. 68, *sappho* p. 69, *titania* p. 70, *violacea*, *papilionaria* p. 71, *peri*, *prunella* p. 72, *hiantha* p. 74, *zoraster* p. 76, *zinnia* p. 78 Brazil, *ophiolinea* p. 68, *oviphora* p. 73, *infanta* p. 74, *ovipositoria* p. 76, *filissima* p. 79 Colombia, ryl Paraguay p. 73, *pennata*, *fiametta* Panama p. 75, *priscilla* Argentina p. 79 spp. n.; *cultrina* Curr. (= *currani* Hull) p. 47 figs., HULL Ent. amer. 23.—*B. dracula* sp. n. Honduras p. 52, HULL Bull. Brooklyn ent. Soc. 38.—*B. (Mimocalla) polista* p. 89, *zobeide* p. 90 Brazil, *anona* p. 91, *scintillans* Ecuador, *vanda* p. 136, (*M.*) *erebus* p. 137, *neptuna* p. 138 Brazil, spp. n., HULL Ent. News 54.—*B. amabilis* p. 39, *eruptova* Peru, *nepenthe* Florida, *nymphaea* p. 40, *vespuccia* p. 73, *danaida* p. 74, *minima*, *delicatissima*, *zilla* p. 214, *nigrocilia* Brazil (with var. n. *inclusa*, *hirtipes* Colombia) p. 215, *boadicea* p. 72, *niobe* p. 73, *saffrona* p. 74, *nerissa* p. 215 Ecuador, *aurora* Paraguay p. 73, spp. n., HULL J. Wash. Acad. Sci. 33.—*B. anthermus* see *Mixogaster*; *tiana* see *Pipunculosyrphus globiceps*.

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*Callicera spinolae* redescription p. 155; *aenea* p. 156, *rufa* Schumm. (= *yerburyi* Verr.) p. 157 ♂♀, COE Entomologist 76.

*Calostigma danaida*, *neptuna* spp. n. New World p. 65, HULL Ent. amer. 23.—*C. striata* Wlk. from *Neoscasia* p. 9, HULL Proc. ent. Soc. Wash. 45.—*C.* key p. 257; *striata* Wlk. from *Ascia* p. 258, CURRAN Bull. Amer. Mus. n. H. 78 1941.

*Cartosyrphus* (subgen. n. *Hiatomyia* pp. 127, 131, type *willistoni* Snow), SHANNON Insec. Inscit. menst. 10 1922.—See *Endoiasimyia*.

*Ceratophya* Wied., type *notata*, not synonym of *Microdon* Mg. p. 253, CURRAN Bull. Amer. Mus. n. H. 78 1941.—*C. variegata* see *Mixogaster*.

*Ceriogaster* Will. (= *Zonemyia* Shann.) characters, in subfam. Xylotinae not Cheilosini p. 137, key to spp. p.

138; *transversa* Wlk. from *Syritta* p. 137, HULL Rev. Soc. ent. Argent. 12.—*C. auricaudata* see *Mutillomyia*.

*Cerioides* revision of S. American spp. pp. 167–173; *barbipes* Lw. (= *acra* Curr.) p. 168; *shannoni* p. 169, *travassosi* p. 172 spp. n. Brazil, LANE & CARRERA Rev. Ent. Rio de J. 14.—*C. Rond.* (= *Polybiomyia* Shann.), key to some American spp. p. 243, CURRAN Bull. Amer. Mus. n. H. 78 1941.

*Cheilosia* (subgen. n. *Chilomyia* p. 121), SHANNON Insec. Inscit. menst. 10 1922.—*C. rufipes* see *Melanostoma*.

*Chilomyia* subgen. n. (type *occidentalis* Will.) see *Cheilosia*.

*Endoiasimyia* Big. (= *Hiatomyia* Shann.) p. 10, HULL Proc. ent. Soc. Wash. 45.

*Eristalis bequaerti* p. 84, *antiopa* p. 87, *dorothea* p. 88 Paraguay, *glabella* Panama p. 85, *thalia* Bogota p. 86, spp. n., HULL Psyche 49 1942.—*E. incubus* sp. n. Brazil p. 29, HULL Ent. News 54.—*E. vinetorum* F. (= *soulouquensis* Big.) p. 10, HULL Proc. ent. Soc. Wash. 45.—*E. fo* see *Lathrophthalmus*; *impositus* see *Helophilus similis*.

*Graptomyza globigaster* sp. n. Philippines p. 42, HULL J. Wash. Acad. Sci. 33.

*Habromyia scita* Wlk. from *Helophilus* p. 9, HULL Proc. ent. Soc. Wash. 45.

*Helophilus* list of spp. with globiferous hairs transferred to *Mesembrius*; *similis* Macq. (= *Eristalis impositus* Wlk.) p. 10, HULL Proc. ent. Soc. Wash. 45.—*H. Mg.* (= *Xylota* Mg., *Xylotomima* Shann., *Xylotodes* Shann.), key p. 286; *arcticus* sp. n. Canada [not *arcticus* as in Z.R. 78 1941 p. 197]; *inarmatus* Hunt. (= *apicaudus* Curr. [not *apicata* as in Z.R. 1941 p. 197]) from *Brachypalpus* p. 293; *pretiosa* Lw. from *Plunes* p. 299, CURRAN Bull. Amer. Mus. n. H. 78 1941.—*H. scita* see *Habromyia*.

*Hiatomyia* subgen. n. see *Cartosyrphus* and *Endoiasimyia*.

*Lathrophthalmus fo* Big. from *Eristalis* p. 9, HULL Proc. ent. Soc. Wash. 45.

*Lejops orion* sp. n. Mississippi p. 51, HULL Bull. Brooklyn ent. Soc. 38.—*L. grisescens* sp. n. New Jersey p. 31, HULL Ent. News 54.

*Lepidomyia cincta* see *Quichuana*.

*Melanostoma rufipes* Big. from *Cheilosia* p. 10, HULL Proc. ent. Soc. Wash. 45.

*Merodon equestris* early stages pp. 4–12 figs., DOUCETTE et al. Tech. Bull. U.S. Dep. Agric. no. 809 1942.

*Meromacrus basigera* Wlk. (= *milesoides* Big.) p. 10, HULL Proc. ent. Soc. Wash. 45.

*Mesembrius* list of spp. with globiferous hairs transferred from *Helophilus* p. 10, HULL t.c.

*Mesogramma laenas* Wlk., *vatia* Wlk., *barbula* Wlk., *portia* Wlk. from *Syrphus* p. 10, HULL t.c.—*M. tubularia* p. 103, *nymphalia*, *claracunea* p. 106 Ecuador, *triangulata* Paraguay p. 104, *alphanetica* Mexico p. 105, spp. n., HULL Psyche 49 1942.—*M.* revision pp. 1–40, key to spp. p. 3; *arcturus* p. 18, *bipunctata* p. 22 Brazil, *ecuadorea* p. 19, *brevifacies*, *steatornis* p. 20 Ecuador, *luna* Porto Rico p. 21, *extrapolata* Cuba p. 22, *una* Haiti p. 23 spp. n.; *basilaris* var. n. *bifida* Ecuador p. 26; *anthrax* var. n. *flammaria* Honduras p. 27 figs., HULL Ent. amer. 23.—*M. sylvatica* p. 34, *sylpha* p. 35 Ecuador, *ornata* Paraguay p. 36, spp. n., HULL Ent. News 54.—*M. guttifera* sp. n. Guatemala p. 39, HULL J. Wash. Acad. Sci. 33.

*Melasyrphus nigrocomus* sp. n. Washington p. 48, HULL Bull. Brooklyn ent. Soc. 38.

*Microdon* key to Neotropical spp. p. 248, CURRAN Bull. Amer. Mus. n. H. 78 1941.—*M. barbouri* Parana p. 89, *banksi* Cuba p. 91, spp. n., HULL Psyche 49 1942.—*M. pachypus* Big. from *Paragus* p. 10, HULL Proc. ent. Soc. Wash. 45.—*M. straminea* Para p. 703, *mellogetta* p. 704, *aureoscutum* p. 709, *trilinea* p. 710, *fenestratus* p. 712, *angulata* p. 715 Amazon, *elongata* p. 706, *bispina* p. 707 Brazil, *cerioides* p. 716, *flavoluna* p. 718 Paraguay, *emerald* Br. Guiana p. 719, spp. n., HULL Ann. Mag. n. H. (11) 10.—*M. mellea* see *Rhoga*.

*Mimocalla* subgen. n. (type *capitata* Lw.) see *Baccha*.

*Mixogaster anthermus* Wlk. from *Baccha* p. 10, HULL Proc. ent. Soc. Wash. 45; p. 47, HULL Ent. amer. 23.—*M. variegata* Wlk. from *Ceratophya* p. 253, CURRAN Bull. Amer. Mus. n. H. 78 1941.

*Mutillimya* gen. n. for *Ceriogaster auricaudata* Will. p. 139, HULL Rev. Soc. ent. Argent. 12.

*Myiolepta bella* see *Apicomya*.

*Nausigaster* key to American spp. p. 253, CURRAN Bull. Amer. Mus. n. H. 78 1941.

*Neoascia striata* see *Calostigma*.

*Ocyptamus funebris* see *Baccha*.

*Paragus pachypus* see *Microdon*.

*Pipunculosyrphus globiceps* Hull (= *Baccha tiara* Curr.) p. 47, HULL Ent. amer. 23.

*Planes* key to American spp.; *americana* Schin., *mexicana* Big. from *Syrpita* p. 299, CURRAN Bull. Amer. Mus. n. H. 78 1941.—*P. pretiosa* see *Heliophilus*.

*Polybiomyia* see *Cerioides*.

*Quichuana cincta* Big. from *Lepidomyia* p. 9; (*Merodon*) *angustiventris* Macq. (= *aurata* Wlk.) p. 10, HULL Proc. ent. Soc. Wash. 45.

*Rhingia campestris* egg p. 127 fig., HAMMER Biol. Ecol. Invest. Flies 1941.—*R. longirostris* sp. n. Ecuador p. 430 figs., FLUKE Ann. ent. Soc. Amer. 36.

*Rhinoprosopa flavophylla* sp. n. Peru p. 139, HULL Ent. News 54.—*R. lucifer* sp. n. Ecuador p. 216, HULL J. Wash. Acad. Sci. 33.

*Rhoga mellea* Curr. from *Microdon* p. 253, CURRAN Bull. Amer. Mus. n. H. 78 1941.

*Salpingogaster diana* sp. n. Brazil p. 33, HULL Ent. News 54.—*S.* key p. 283, CURRAN Bull. Amer. Mus. n. H. 78 1941.

*Sphaerophoria transversa* sp. n. Oregon p. 32, HULL Ent. News 54.

*Styxia* subgen. n. (type *ebilis* sp. n.) see *Baccha*.

*Syrpita transversa* see *Ceriogaster*; *americana*, *mexicana* see *Planes*.

*Syrphus laenas*, *vatia*, *barbula*, *portia* see *Mesogramma*.

*Therantha* subgen. n. (type *atypica* Curr.) see *Baccha*.

*Tuberculanostoma* gen. n., key to spp. p. 425; *antennatum* (type) p. 426, *ciliatum* p. 428, *browni* p. 429, *pectinis* p. 430 spp. n., Ecuador figs., FLUKE Ann. ent. Soc. Amer. 36.

*Volucella osburni* sp. n. Paraguay p. 92, HULL Psyche 49 1942.—*V. vittifacia* p. 18, *emeralda* p. 20, *horticola* p. 21, *chaetogaster* p. 22, *oestroides* p. 23 Brazil, *sepi* Centr. America p. 25, *inquisitor* Centr. America, Mexico p. 26, *niveipes* Java p. 27, *flavolinea* Mindanao p. 29, *placiva* Ecuador p. 30, *fumosa* Mt. Roraima, Br. Guiana p. 32, *pulchrapuella* Jamaica p. 33, *tumicephala* Peru p. 35, *opalicolor* Bolivia p. 36, *cruciata* Centr. America, Guatemala p. 37, *conifacia* Trinidad p. 39, spp. n., HULL Ann. Mag. n. H. (11) 10.—*V. brunngaster*, *verdigaster* Colombia, *viridigaster* Ecuador p. 41, *flavogaster* Yunnan p. 42, spp. n., HULL J. Wash. Acad. Sci. 33.

*Xylota althaea* sp. n. S. Carolina p. 30, HULL Ent. News 54.—*X. artemita* p. 49, *astarte* p. 50, spp. n. Mississippi, HULL Bull. Brooklyn ent. Soc. 38.—*X.* see *Heliophilus*.

*Xylotodes* see *Heliophilus*.

*Xylotomina* see *Heliophilus*.

*Zelima* revision of Swedish spp. pp. 19–23, key p. 21; *suecia* sp. n. Sweden p. 23 figs., RINGDAHL Opusc. ent. Lund 8.

*Zonemyia* see *Ceriogaster*.

#### CONOFIDAE.

*Zodion* key to N. American groups p. 187; *cyanescens* sp. n. N. Carolina p. 188; *obliquefasciatum* characters p. 190, CAMRAS Ent. News 54.

#### Muscoidea Calyptrata.

General consideration of *Oestromuscaria*, TOWNSEND Man. Myol. pt. 12 1942 365 pp. 79 pls.

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*Baucterebra* subgen. n. see *Cuterebra*.

*Cephenemyia jellisoni* larva, puparium pp. 173–179 figs., COWAN Canad. J. Res. (D) 21.

*Cuterebra* (*Baucuterebra* subgen. n.) [cf. *Alouattamyia* Z.R. 79 1942 p. 173] *almeidai* p. 2, (*Metacuterebra*) *pessoai* p. 4, (*M.*) *worontzowi* p. 6 spp. n. Brazil; discussion of subgen. and their types pp. 1-2 figs., GUIMARÃES & CARRERA Arq. Zool. São Paulo 3 1941.—*C. horripilum* Clark (= *abdominalis* Swenk), *cuniculi* Clark distinct spp.; *princeps* Aust. (= *albifrons* Swenk) p. 182; *buccata* F. (= *scudderi* Tns.) p. 183, DALMAT Ent. News 54.—*C. beameri* sp. n. Kansas p. 25, HALL Proc. ent. Soc. Wash. 45; egg p. 49 figs., BEAMER, PENNER & HIBBARD J. Kans. ent. Soc. 16.

*Hypoderma crossii* larva p. 367 figs., SONI Indian J. vet. Sci. 9 1939; egg p. 280 fig., SONI Curr. Sci. 11 1942.

## TACHINIDAE.

*Achaetoneura stilla* sp. n. U.S.A. p. 17, REINHARD J. Kans. ent. Soc. 16.

*Angustia* gen. n. for *Zenillia angustivitta* Aldr. & Web. p. 107, SELLERS Proc. U.S. nat. Mus. 93 no. 3157.

*Aplomya* revision of Nearctic spp. pp. 70-97, key to spp. p. 72 (= *Collatia* Curr.) p. 71, scope discussed p. 72; *theclarum* Scud. p. 76, *affinis* Fall. p. 81, *mitis* Mg. p. 90 from *Exorista*; *trisetosa* Coq. p. 78, *setinervis* Coq. p. 83, *crassisetula* Aldr. & Web. p. 84, *caesar* Aldr. p. 88, *polita* Coq. p. 90, *helvina* Coq. p. 91, *epicydes* Wlk. p. 92, *fronto* Coq. p. 96 from *Zenillia*; *estigmeneasis* p. 79, *neurotomae* p. 85, *confusionis* p. 86, *trichiosomae*, *cerurae* p. 94, *pheosiae* p. 95 U.S.A., *imitator* Br. Columbia p. 93 spp. n., SELLERS t.c.

*Appendicia frontalis* Toth., *solita* Reinh. from *Ernestia* p. 69, BROOKS Canad. Ent. 75.

*Aulicomymia* gen. n. (nr. *Plagiomima*) p. 80, *invulnerata* sp. n. Ohio p. 81, REINHARD Bull. Brooklyn ent. Soc. 38.

*Cacozelus* gen. n. (Germaniini), *riederi* sp. n. Oregon p. 168, REINHARD Canad. Ent. 75.

*Carcelia* revision of Nearctic spp. pp. 37-70, key to spp. p. 41; (= *Eucarcelia* Baran., *Oxexorista* Towns. (pt.)); *bombylans* R.-D. considered genotype p. 38; scope discussed p. 40; *inflatiipalpis* Aldr. & Web. from

*Zenillia* p. 45; *malacosomae* p. 50, *diacrisiae* p. 61, *perplexa* p. 65, *olenensis* p. 67, *yalensis* p. 69 spp. n. U.S.A.; *reclinata* Aldr. & Web. p. 48, *protuberans* Aldr. & Web. p. 54 from *Paraxorista*; *lagoae* Towns. p. 58, *flaviostris* Wulp p. 60 from *Exorista*, SELLERS Proc. U.S. nat. Mus. 93 no. 3157.

*Carinosillus* gen. n. (nr. *Opsotheresia*) p. 84, *pravus* sp. n. New York p. 85, REINHARD Bull. Brooklyn ent. Soc. 38.

*Ceracia subandina* sp. n. Argentina p. 19 fig., BLANCHARD Rev. Soc. ent. Argent. 12.

*Chrysoexorista viridis*, *angustifrons* see *Zenillia*.

*Chrysophryxe* gen. n. (nr. *Thelymyia*), *tibialis* sp. n. Brazil p. 106, SELLERS Proc. U.S. nat. Mus. 93 no. 3157.

*Collatia* see *Aplomya*.

*Epiplagiops* gen. n. (nr. *Stomatomyia*) p. 450, *littoralis* sp. n. Argentina p. 451 figs., BLANCHARD Rev. Soc. ent. Argent. 11.

*Ernestia* (s. l.) revision of Canadian spp. pp. 66-78, BROOKS Canad. Ent. 75.—*E. nigrocornea* (*fasciata*) see *Pseudomeriania*; *frontalis*, *solita* see *Appendicia*.

*Eucarcelia* see *Carcelia*.

*Exorista angustata*, *boarmiae* see *Zenillia*; *coeruleiventris* see *Z. lineata*; *lagoae*, *flaviostris* see *Carcelia theclarum*, *affinis*, *mitis* see *Aplomya*.

*Fuscigonia* gen. n. for *Gonia fuscicollis* Toth. p. 223, BROOKS Canad. Ent. 75.

*Gonia* (s. l.) revision of N. American spp. pp. 219-236, key to allied genn. p. 219, scope discussed p. 227, key to N. American spp. p. 228; *pilosa* p. 231, *robusta* p. 234, *smithi* p. 235 Canada, *reinhardi* p. 232, *contumax*, *aturgida* (also Canada) p. 233, *occidentalis* (also Canada) p. 234, U.S.A., spp. n.; *longiforceps* Toth. (= *discalis* Morr.) p. 235; *brevipulvilli* Toth. a valid sp. p. 235 figs., BROOKS t.c.—*G. fuscicollis* see *Fuscigonia*; *sagax* see *Knabia*; *setigera* see *Setigonia*.

*Gremlinotrophus* gen. n. (Actiini), *derisus* sp. n. U.S.A., Alberta p. 163, REINHARD Canad. Ent. 75.



*Gueriniopsis* gen. n. (nr. *Guerinia*) p. 166, *plausilis* sp. n. U.S.A., Canada p. 167, REINHARD t.c.

*Histochaeta claripennis* sp. n. Utah p. 15, REINHARD J. Kans. ent. Soc. 16.

*Hyalomyodes argentinensis* sp. n. Argentina p. 358 fig., BLANCHARD Rev. Soc. ent. Argent. 11 1942.

*Hyphantrophaga* see *Zenillia*.

*Isomera* see *Reaumuria*.

*Knabia sagax* Tns. from *Gonia*; *frontosa* Say (= *hirsuta* Tns.) p. 223, BROOKS Canad. Ent. 75.

*Lispideosoma* gen. n. (nr. *Lispidea*) p. 164, *flavipes* sp. n. Wisconsin p. 165, REINHARD Canad. Ent. 75.

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*Meriania septentrionalis* see *Pseudomeriania*.

*Mericia* key to Canadian spp. p. 71; *manitoba*, *occidentalis* spp. n. Canada p. 77 figs., BROOKS Canad. Ent. 75.—*M. fasciventris* see *Promericia*.

*Minella americana* sp. n. Ohio p. 14, REINHARD J. Kans. ent. Soc. 16.

*Mystacella lineata* see *Zenillia*.

*Nimiocauda* gen. n. (Sturmiini) p. 78, *erilis* sp. n. New York p. 79, REINHARD Bull. Brooklyn ent. Soc. 38.

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*Pacidianus* gen. n. (nr. *Houghia*) p. 88, *hirsutus* (type) p. 89, *persimilis* p. 90 spp. n. U.S.A., REINHARD Bull. Brooklyn ent. Soc. 38.

*Pantagathus curulis* sp. n. U.S.A. p. 18, REINHARD J. Kans. ent. Soc. 16.

*Paraexorista reclinata*, *protuberans* see *Carcelia*.

*Peleteria torta* sp. n. Arizona p. 21, REINHARD J. Kans. ent. Soc. 16.

*Phryxe* revision of Nearctic spp. pp. 31-37, key to spp. p. 32; *pecosensis* Towns. a valid sp. p. 35, SELLERS Proc. U.S. nat. Mus. 93 no. 3157.

*Promericia* gen. n. for *Mericia fasciventris* Curr. p. 69, BROOKS Canad. Ent. 75.

*Pronemorilla kreibohmi* sp. n. Argentina p. 364 fig., BLANCHARD Rev. Soc. ent. Argent. 11 1942.

*Proparachaetopsis* gen. n. (Exoristinae), 5-vittata sp. n. Argentina p. 367 fig., BLANCHARD Rev. Soc. ent. Argent. 11 1942.

*Pseudohystieria crossi* sp. n. Argentina p. 361 fig., BLANCHARD t.c.

*Pseudomeriania* gen. n. for *Ernestia nigrocornea* Toth. (= *Ernestia fasciata* Curr., *Meriania septentrionalis* p. 70) p. 69, BROOKS Canad. Ent. 75.

*Psilopleura* gen. n. (nr. *Goniochaeta*) p. 165, *arida* sp. n. U.S.A. p. 166, REINHARD Canad. Ent. 75.

*Ptilodexia agilis* sp. n. Texas p. 22, REINHARD J. Kans. ent. Soc. 16.

*Reaumuria* R.-D. (= *Isomera* R.-D.) scope pp. 221, 227 (notes), BROOKS Canad. Ent. 75.

*Rhedia setifacies*, *nigra* spp. n. Canada p. 225 figs., BROOKS t.c.

*Setigonia* gen. n. for *Gonia setigera* Toth. p. 221, BROOKS t.c.

*Siphona lurida* sp. n. Oregon p. 20, REINHARD J. Kans. ent. Soc. 16.

*Sisyropa* revision of Nearctic spp. pp. 97-103, key to spp. p. 99 (= *Oxexorista* Towns.) p. 97; *alypiae* sp. n. U.S.A. p. 101, SELLERS Proc. U.S. nat. Mus. 93 no. 3157.

*Thelymyia* revision of Nearctic spp. pp. 103-106, key to spp.; *curriei* Coq. from *Zenillia* p. 104; *erecta* sp. n. Idaho p. 105, SELLERS t.c.

*Vibrissotheresia* gen. n. (nr. *Opsotheresia*) p. 86, *pechumani* sp. n. New York p. 87, REINHARD Bull. Brooklyn ent. Soc. 38.

*Xanthozona melanopyga* morphology pp. 50-54, larva, pupa pp. 46-50 figs., TRAVASSOS & CARRERA Arq. Zool. São Paulo 3 1941.

*Ypophaemyia haywardi* sp. n. Argentina p. 370 fig., BLANCHARD Rev. Soc. ent. Argent. 11 1942.

*Zenillia* R.-D. (= *Hyphantrophaga* Towns.) p. 4, revision of Nearctic spp. pp. 4-31, scope discussed p. 4, key to spp. p. 6; *angustata* Wulp (= *coquilletti* Aldr. & Web.) p. 12, *boarmiae* Coq. p. 21 from *Exorista*; *euchaetiae* p. 13, *desmiae* p. 16, *fulgoris* p. 24, *dawsoni* p. 29 U.S.A., *tucumanensis* p. 21, *taglinoi* p. 25 Argentina, *autographae* Cuba p. 23, *facialis* Mexico, Peru p. 28 spp. n.; *hyphantriae* Towns. (= *ceratomiae* Coq.) p. 15; *viridis* Towns. from *Chrysoexorista* p. 26; *lineata* Wulp (= *Exorista coeruleiventris* Wulp) from *Mystacella* p. 27; *angustifrons* Towns. from *Chrysoexorista* and a valid sp. p. 30, SELLERS Proc. U.S. nat. Mus. 93 no. 3157.—*Z. inflatipalpis* see *Carcelia*; *helvina*, *epicydes*, *trisetosa*, *setinervis*, *crassiseta*, *caesar*, *polita*, *fronto* see *Aplomya*; *curriei* see *Thelymyia*; *angustivitta* see *Angustia*.

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*Calliphora pallicrus* Thoms. from *Sarcophaga*; *minor* Mall. probably a synonym p. 32, HARDY Proc. Linn. Soc. N.S.W. 68.

*Lucilia ampullacea* notes p. 109, BRITTEN Northw. Nat. 18.

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*Chloriona unicolor* varr. n. *alba*, *dorsalis*, *flava*, *nigrofasciata*, *nigromaculata* Finland p. 330, METCALF t.c.

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*palliditestacea* Finland p. 424; *distanti* n. n. for *modesta* Dist. nec Fieb. p. 431; *exigua* var. *arida* n. n. for *e.* var. *lugubrinae* Fieb. nec Boh. p. 438; *flava* n. n. for *flavescens* Ivan. nec F. p. 442; *flaveola* var. n. *dorsoinfusata* p. 444; *forcipata* varr. n. *angustata*, *dorsigera*, *rufescens* p. 447 Finland; *laterana* n. n. for *lateralis* Van D. nec Fieb. p. 458; *lugubrina* varr. n. *albido-flavis*, *bimacula*, *piceonigra* p. 465; *obscorella* var. n. *fuscotestacea* p. 476; *pellucida* varr. n. *bilineata* p. 494, *pellotestacea*, *griseoflava*, *testacea* p. 495; *pullula* varr. n. *basiflavis*, *infusata* p. 502; *sordidula* var. n. *sahlbergi* p. 509 Finland; *muirella* n. n. for *pacifica* Muir nec Crwf. p. 470; *semi-obscura* n. n. for *seminigra* Melich. nec Stål p. 505; *stål* n. n. for *bohemani* Stål 1858 nec 1854 (with var. n. *flavalis* Finland p. 511) p. 510; *striatella* var. *reyana* n. n. for *s.* var. *dorsalis* Rey nec Fitch p. 518; *uniformis* n. n. for *unicolor* Wlk. nec H.-S. p. 521; *walkeri* n. n. for *dorsalis* Wlk. nec Fitch p. 522, METCALF t.c.

*Euidella speciosa* var. n. *obscura* Finland p. 249, METCALF t.c.

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*Kelisia fasciata* var. n. *nigra* p. 185, *triangularis* p. 186 England; *guttula* varr. n. *distincta*, *fulva* Finland p. 190, METCALF t.c.

*Liburnia matsumurana* n. n. for *furcata* Mats. nec Prov. p. 364, METCALF t.c.

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*Megamelus muiri* n. n. for *albicollis* Muir nec Crwf. p. 209; *notula* varr. n. *fuscus*, *pallidulus* Finland p. 214, METCALF t.c.

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*Phyllodinus kirkaldyi* n. n. for *koebelei* Kirk. nec Osb. p. 148, METCALF t.c.

*Pissonotus muiri* n. n. for *albicollis* Crwf. nec Motsch. p. 274, METCALF t.c.

*Purohita muiri* n. n. for *nigripes* Muir 1919 nec 1916, METCALF t.c.

*Stenocranus hokkaidoensis* n. n. for *vittatus* Mats. nec Stål p. 168; *matsu-*

*murai* n. n. for *breviceps* Mats. nec Doz. p. 172, METCALF t.c.

*Stiroma bicarinata* varr. n. *nigra* Gt. Britain, *alpha* Finland, Lapland, *vittata* p. 77; *borealis* var. n. *carinata* p. 78 Finland, METCALF t.c.

*Ugyops osborni* n. n. for *granulata* Osb. nec Melich. p. 45; *walkeri* n. n. for *longicornis* Wlk. nec Latr. p. 47, METCALF t.c.

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*Amastris guttata* sp. n. Brazil p. 139 figs., da FONSECA Arq. Inst. biol. São Paulo 12 1941.—*A. pacifica* sp. n. Guatemala p. 478 fig., FUNKHOUSER Ann. ent. Soc. Amer. 36.

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*Dikraneura* revision of British spp. pp. 147–150, key p. 148; *variata* Hardy (= *luteola* Fieb. nom. nud.) p. 147, CHINA Trans. Soc. Br. Ent. 8.—*D. unguolata*, *retusa* p. 55, *latacephala* p. 57, *aperta*, *hyaline* (as *hyalina* pl. legend) p. 58, *benedicti* p. 59, *texana*, *tenera* p. 61, *furcata*, *munda* p. 62, *salicis*, *bisagittata* p. 63, spp. n. U.S.A. figs., BEAMER J. Kans. ent. Soc. 16.

*Draeculacephala mollipes* further description; *constricta* sp. n. Ohio p. 193 fig., DAVIDSON & DeLong Ohio J. Sci. 43.

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*Gyponana* key to N. American spp. p. 22; *conferta*, *brevihama* p. 24, *avara*, *ortha* p. 25, *orientata*, *trigona* p. 26, *brevita* p. 27, *appressa*, *fimbriata* p. 28, *contractura*, *arcta* p. 29, *spissa* p. 30, *vasta*, *conspira* p. 31, *panda*, *amara* p. 32, *desa*, *tubera* p. 33, *praelonga*,

*barda* p. 34, *parallela*, *offula* p. 35, *producta* p. 36, *pingua*, *turbina* p. 37, *morosita*, *expanda* p. 38, *fagi*, *extenda* p. 39, *cubita*, *acia* p. 40, *pro-tena*, *palma* p. 41, *compressa*, *accurata*, *gibbera* p. 43, *cunea*, *mali* p. 44, *pro-cera* p. 45, *gladia* p. 46, *vincula*, *lamina* p. 47, *cacumina*, *serrata* p. 48 (with *var. n. futena* (also Canada)), *salsa* p. 49, *hasta* p. 50, *aculeata* p. 51, *fastiga* p. 52, *angula*, *librata* p. 54, *calamistra*, *omani* p. 55 *spp. n.*; *octolineata* *var. n. serpenta* p. 53 U.S.A. figs., DeLong Monogr. Study N. Amer. Gyponinae 1942.—*G. chadana* (= *turbinella*), *pul-lata*, *ampliata* see *Rugosana*.

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*balli* p. 685, *spp. n.* U.S.A. figs., KNULL Amer. midl. Nat. 28 1942.

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*Petalcephala manchurica* *sp. n.* Man-churia p. 221, KATO Kontyû 5 1932.

*Polana* *gen. n.* for *Gypona quadrino-tata* Spang. (type) p. 110, *G. celata* Fowl. (= *resima* Fowl.) p. 111, *G. exornata* Fowl. p. 112 figs., DeLong Monogr. Studies N. Amer. Gyponinae 1942.

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*Prairiana* key to N. American *spp. p.* 73; *hirsuta* p. 77, *latens* p. 80, *dualis* p. 82, *globosa* U.S.A., *bifurcata* Mexico p. 84 *spp. n.*; *ponderosa* *var. n. longiora* p. 79; *orizaba* *var. n. rolenta* p. 80; *kansana* *var. n. angustens* p. 83 U.S.A. figs., DeLong Monogr. Study N. Amer. Gyponinae 1942.

*Rugosana* *gen. n.* for *Gypona rugosa* Spang. (type) p. 64, *G. ramosa* Kirk. p. 66, *Gyponana chadana* Ball (= *turbinella* Ball) p. 67, *G. pullata* Ball p. 68, *G. ampliata* Ball p. 71; key to *spp. p.* 64; *fibrata* p. 66, *querci* p. 69, *lora*, *manua* p. 70, *verrucosa* U.S.A.; *plummeri* Mexico p. 72 *spp. n.* figs., DeLong t.c.

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*Stoneana* gen. n., *marthae* (type) p. 448, *balli* p. 449, *separatus* p. 450, spp. n. Mexico figs., DeLONG Ann. ent. Soc. Amer. 36.

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*Typhlocyba* revision of British spp. pp. 112-139, key p. 131; *frustrator* Edw. (= *solearis* Rib.) p. 112; *barbata* Rib. a subsp. of *prunicola* Edw. p. 115; *plebeja* Edw. (= *divergens* Rib.) p. 116; *opaca* Edw. a var. of *cruenta* H.S. p. 123; *avellanae* Edw. (= *bidentata* Edw.) p. 124; *diversa* Edw. (= *tridentata* Edw.) p. 126 figs., CHINA Trans. Soc. Br. Ent. 8.—*T. luculla* sp. n. Minnesota p. 139 fig., MEDLER Tech. Bull. Minn. agric. Exp. Sta. no. 155 1942.—*T. spinosa*, *nigricephala* p. 131, *furcata* spp. n.; *gillettei* subsp. n. oregonensis p. 133 U.S.A. figs., BEAMER Canad. Ent. 75.

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*Asphagidella* see *Psylla*.

*Asphagis* see *Psylla*.

*Ataenia clara* sp. n. Caroline Is. p. 77 fig., TUTHILL Occ. Pap. Bishop Mus. 17 1942.

*Baeopelma* see *Psylla*.

*Blastophysa* see *Pachypsylla*.

*Calophya gallifex* Kieff. & Jörg. from *Trioza* p. 159; further description p.

160; *williamsoni* sp. n. Argentina p. 163 figs., LIZER & TRELLES Notas Mus. La Plata 8.

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*Colopelma* see *Trioza*.

*Euphalerus vermiculosus* Crwf. (= *beameri* Tuth.) p. 524; *rugipennis* Crwf. (= *r.* var. *immaculatus* Crwf.) p. 525 figs., TUTHILL Iowa St. Coll. J. Sci. 17.

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*Heteropsylla puertoricensis* sp. n. Porto Rico p. 28, CALDWELL J. Agric. Univ. P.R. 26 1942.

*Labicria* see *Psylla*.

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288, *marcidus* p. 290, *nicholli* p. 291, *perlevis* p. 293, *petilus* p. 294, *projectus* p. 296, *recalvus* p. 297, *smithi* p. 300, *subaquilus* p. 302, *torresi* p. 303, *walkeri* p. 305 **spp. n.** Australia figs., HILL t.c.—*E. ocellaris* see *Mirotermes*.

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*Eneriblatta* gen. n. (Archimylacridae) p. 20, *elegantissima*, *insignis* p. 21, *valongensis*, *lusitanica* p. 22 spp. n. Coal Measures, Portugal figs., TEIXEIRA t.c.

*Eolampra* gen. n. [? nom. nud.] (Blattodea) p. 523 figs., PONGRÁČZ Nova Acta Leop. Carol. (N.F.) 2 1935.

*Phylloblatta portuensis* sp. n. Coal Measures, Portugal p. 19 figs., TEIXEIRA Bol. Soc. geol. Portugal 1 1941.

*Stephanomyiacris* gen. n. (Hemimylacridae), *duriensis* p. 25, *zbyzewskii* p. 26 spp. n. Coal Measures, Portugal figs., TEIXEIRA t.c.

## Palaeodictyoptera.

*Valdeania* gen. n. (Dictyonauridae) p. 15, *medeirosi* sp. n. Coal Measures, Portugal p. 16 figs., TEIXEIRA Bol. Soc. geol. Portugal 1 1941.

## ERRATA.

Vol. li, 1914, p. 312, col. 2, after "*Jassopsaltria*" insert "**gen. n.**"

Vol. lix, 1922, p. 137, No. 3070 and p. 174, col. 1, lines 2, 8 and 39, after "WOLCOTT, A. B." insert "& CHAPIN, E. A."

Vol. lx, 1923, p. 109, No. 2461 and p. 174, col. 1, for "*Escapion*" read "*Exapion*"

Vol. lx, 1923, p. 311, col. 2, line 23, insert "p. 116" after "**gen. n.**"; line 24, for "p. 116" read "p. 117"

Vol. lx, 1923, p. 311, col. 2, line 25, entry under *Rihana* out of order.

Vol. lx, 1923, p. 311, col. 2, for "*Nabulua*" read "*Nabalua*"

Vol. lxiii, 1926, p. 321, col. 2, line 17, for "p. 261" read "p. 621"

Vol. lxvii, 1930, p. 63, No. 1328, for "29" read "20"

Vol. lxxii, 1935, p. 283, col. 1, line 39, col. 2, line 8 and 3 lines from end, p. 284, col. 2, line 7, p. 285, col. 2, 16 lines from end, and p. 286, col. 2, line 38, for "2" read "1"

Vol. lxxii, 1935, p. 400, col. 2, 3 lines from end, for "TOKUNAGA" read "ESAKI"

Vol. lxxiii, 1936, p. 384, col. 2, for "*Apatalina*" read "*Apatelina*"

Vol. lxxiii, 1936, p. 408, col. 1, for "*Eurinscopus*" read "*Eurinoscopus*"

Vol. lxxiii, 1936, p. 410, col. 2, 14 lines from end, for "*pseudostyracophila*" read "*pseudostyracophila*"

Vol. lxxiv, 1937, p. 193, col. 1, 8 lines from end, before "GÖTZ" and col. 2, 5 lines from end, before "URQUHART" insert "**Orthoptera:**"

Vol. lxxv, 1938, p. 395, col. 2, line 18, for "t.c." read "Univ. Kansas Sci. Bull. 24 1937"

- Vol. lxxv. 1938, p. 396, col. 1, 14 lines from end, for "Porto Rico" read "Brazil"
- Vol. lxxvi. 1939, p. 287, col. 2, last line, after "Syria" insert "p. 91"
- Vol. lxxvi. 1939, p. 290, col. 2, line 30, for "p. 460" read "p. 450"
- Vol. lxxvi. 1939, p. 294, col. 2, for "*Bethylyopsis*" read "*Bethylopsis*"
- Vol. lxxviii. 1941, p. 83, No. 1659 and p. 155, col. 2, line 16, for "[original paper not seen]" read "[Abstr. of unpublished Thesis.]"
- Vol. lxxviii. 1941, p. 132, col. 1, line 23, for "*wille*" read "*willei*"
- Vol. lxxviii. 1941, p. 154, col. 1, line 17, for "Chalcididae" read "Alysiidae" and transfer whole entry to BRACONIDAE
- Vol. lxxviii. 1941, p. 175, col. 1, 2 lines from end, delete "*elama*"
- Vol. lxxviii. 1941, p. 204, col. 2 and p. 206, col. 1, transfer *Effitayloria* and *Tayloria* to TACHINIDAE
- Vol. lxxviii. 1941, p. 239, col. 2 and p. 240, col. 1, transfer *Protazleca* and *Tylocornus* to HYMENOPTERA
- Vol. lxxix. 1942, p. 16, No. 150, for "Uma" read "Una"; for "pp. 34-35" read "pp. 34-36"
- Vol. lxxix. 1942, p. 27, No. 416, for "[? pp.]" read "pp. 108-109"
- Vol. lxxix. 1942, p. 30, No. 466, after "92" insert "1942"
- Vol. lxxix. 1942, p. 47, No. 874, and p. 110, col. 1, 12 lines from end, for "72" read "74"
- Vol. lxxix. 1942, p. 54, Nos. 1012 and 1013, for "Moseley" read "Mosely"
- Vol. lxxix. 1942, p. 60, No. 1140, for "Ramchandra" read "Ramchandra Rao"
- Vol. lxxix. 1942, p. 160, col. 2, 14 lines from end, for "268" read "266"
- Vol. lxxix. 1942, p. 165, col. 2, transfer "*Dixa*" to DIXIDAE
- Vol. lxxix. 1942, p. 172, col. 1, line 15, for "34" read "35"
- Vol. lxxix. 1942, p. 184, col. 1, line 37, for "[? pp.]" read "p. 108"
- Vol. lxxix. 1942, p. 201, col. 2, line 2, for "p. 170" read "p. 70"





# 14. PROTOCHORDATA

INCLUDING

## ENTEROPNEUSTA AND PTEROBRANCHIA

BY

M. BURTON, D.Sc.

### I.—TITLES.

- 1.—Opinion 145. On the status of names first published in works rejected for nomenclatorial purposes and subsequently published in other works. Opinions and Declarations rendered by Internat. Comm. Zool. Nomencl. 2 (12) 1943 pp. 99–105.
- 2.—Opinion 147. On the principles to be observed in interpreting Article 34 of the International Code in relation to the rejection, as homonyms, of generic and subgeneric names of the same origin and meaning as names previously published. Opinions and Declarations rendered by Internat. Comm. Zool. Nomencl. 2 (14) 1943 pp. 123–129.
- 3.—Declaration. On the need for new names to be clearly indicated as such on their first publication and on the need for avoiding the publication of names as new on more than one occasion. Opinions and Declarations Internat. Comm. Zool. Nomencl. 1 (6) 1943 pp. 41–45.
- 3a.—Birabén, M. Fernando Lahille. Rev. Mus. La Plata N.S. Secc. Ofic. 1940 1941 pp. 133–148.
- Chacko, P. I. *see* Devanesen, D. W.
- 4.—Cori, C. I. Phoronidea. Bronn Klassen und Ordnungen des Tierreichs 1939 Bd. 4 Abt. IV Buch I Teil 1 183 pp. 161 figs.
- 5.—Das, S. M. On some Ascidians from Madras. [Abstract in.] Proc. Indian Sci. Congr. 28 (3) 1942 p. 178.
- 6.—Das, S. M. The neuro-muscular test in Tunicata. [Abstract in.] Proc. Indian Sci. Congr. 29 (3) 1943 p. 155.
- 7.—Das, S. M. On the digestive glands of Monascidians. [Abstract in.] Proc. Indian Sci. Congr. 29 (3) 1943 p. 155.
- 8.—Deffner, M. Sterine niederer Meerestiere. I. Z. phys. Chem. Berlin 278 1943. [Tunicates p. 165.]
- 9.—Devanesen, D. W. and Chacko, P. I. Balanoglossids as food of fish. Proc. Indian Sci. Congr. 29 (3) 1943 p. 155.
- Fleming, R. H. *see* Sverdrup, H. U.
- 10.—Gilson, H. C., Hollick, F. S. J. and Pantin, C. F. A. Additions to the marine fauna of the Scott Head Region. Ann. Mag. nat. Hist. (11) 11 1944. [Tunicates p. 236.]
- 10a.—Grave, C. The larva of *Styela* (*Cynthia*) *partita*: structure, activities and duration of life. J. Morph. Philadelphia 75 1944 pp. 173–188, 1 pl. 2 figs.
- 11.—Hilton, W. A. The blood of *Amphioxus* (*Branchiostoma*). J. Ent. Zool. Claremont Cal. 35 1943 pp. 31–32 6 figs.
- Hollick, F. S. J. *see* Gilson, H. C.
- 12.—Hopkins, H. S. Biological Results of the last cruise of the Carnegie. Scient. Res. Cruise VII Carnegie 1928–29 Biol. 4 1943. [Tunicates p. 92.]
- Johnson, M. W. *see* Sverdrup, H. U.
- 13.—Morgan, T. H. The genetic and the physiological problems of self-sterility in *Ciona*. VI. Theoretical discussion of genetic data. J. exp. Zool. Philadelphia 95 1944 pp. 37–59 7 figs.
- Pantin, C. F. A. *see* Gilson, H. C.

14.—Pope, E. C. Animal and plant communities of the coastal rock-platform at Long Reef, New South Wales. Proc. Linn. Soc. N.S.W. 68 (5-6) 1943. [Protochordates pp. 239, 240, 245, 247-8.]

14a.—Pyefinch, K. A. The intertidal ecology of Bardsey Island, North Wales, with special reference to the recolonisation of rock surfaces, and the rock-pool environment. J. Animal Ecol. 12 1943 pp. 82-108 24 figs.

15.—Sverdrup, H. U., Johnson, M. W. and Fleming, R. H. The Oceans, their physics, chemistry, and general biology. N.Y. 1942 1087 pp. 265 figs. 7 charts.

## II.—SUBJECT INDEX.

### GENERAL.

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List of publications by Lahille, Birabén, 3a.

Physics, Chemistry and General Biology of Oceans, SVERDRUP, JOHNSON & FLEMING, 15.

### STRUCTURE.

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### PHYSIOLOGY.

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## DEVELOPMENT.

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### GENETICS.

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## III.—SYSTEMATIC INDEX.

### TUNICATA.

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*Styela (Cynthia) partita* larva, GRAVE, 10a.

### HEMICHORDATA.

(Vacant.)

### CEPHALOCHORDATA.

*Amphioxus* composition of blood, HILTON, 11.

### PHORONIDEA.

General, ÇORI, 4.

# 15. PISCES

BY

E. TREWAVAS, D.Sc.

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### I.—TITLES.

1.—Opinion 138. On the method by which the Amendment to Article 25 of the International Code adopted at the Budapest meeting of the International Zoological Congress, relating to the replacement of invalid names, should be interpreted. Opinions rendered Internat. Comm. Zool. Nomencl. 2 1942 pp. 29–34.

2.—Opinion 141. On the principles to be observed in interpreting Article 4 of the International Code relating to the naming of families and sub-families. Opinions rendered Internat. Comm. Zool. Nomencl. 2 1943 pp. 55–66.

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4.—Opinion 147. On the principles to be observed in interpreting Article 34 of the International Code in relation to the rejection, as homonyms, of generic and subgeneric names of the same origin and meaning as names previously published. Opinions rendered Internat. Comm. Zool. Nomencl. 2 1943 pp. 123–132.

5.—Opinion 148. On the principles to be observed in interpreting Articles

25 and 34 of the International Code in relation to the availability of generic names proposed as emendations of, or as substitutes for, earlier generic names of the same origin and meaning. Opinions and Declarations Internat. Comm. Zool. Nomencl. 1943 pp. 133–144.

6.—Aquarium, Philadelphia 10 nos. 9 to 12 1942, 11 nos. 1–8 1942, nos. 9–12 1943, 12 nos. 1–8 1943.

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8.—Fisheries investigations. Rep. Council sci. industr. Res. Australia 1941–42 (1943) pp. 43–47.

9.—Rep. Fish. Res. Bd. Canada 1942 (1943), 40 pp.

9a.—Salmon and Trout Mag. London, Nos. 104–106 1942 and 107–109 1943.

Abian, G. L. see Roxas, H. A.

Acharya, B. N. see Niyogi, S. P.

10.—Adams, L. A. Age determination and rate of growth in *Polyodon spathula*, by means of the growth rings of the otoliths and dentary bone. Amer. Midl. Nat. Notre Dame 28 1942 pp. 617–630 including 3 pls.

11.—Aenlle, E. O. Constitucion de los aceites de animales marinos. Notas Inst. esp. Oceanogr. Madrid. Ser. 2 No. 105 1941 19 pp.



- 12.—**Agapov, I. D.** Bionomics of cod (*Gadus morhua* L.) of the west coasts of Novaya Zemlya. Trans. arctic Inst. Leningrad **100** 1937 pp. 25-45 1 pl. [In Russian.]
- 13.—**Agco, A. G.** Philippine Coryphaenidae. Philipp. J. Sci. Manila **72** 1940 pp. 313-315 1 pl.
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- 14.—**Aitken, W. W.** A preliminary report on a check-list of Iowa Teleosts. Proc. Iowa Acad. Sci. **47** 1941 pp. 387-392.
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- 18.—**Amemiya, I.** Studies on the Japanese sardine. Proc. 6th Pac. Sci. Congr. **3** 1940 pp. 257-261.
- 19.—**Amirthalingam, C.** and **Monnington, M.** Spearfish attacks an otter board. Current Sci. Bangalore **10** 1941 pp. 32-33.
- 20.—**Anon.** Pesca en los Andes. Bol. Soc. Venezolana Cienc. nat. **6** 1940 pp. 262-264.
- 21.—**Anon.** Winter get-together. Fish aggregations. Bull. New York Zool. Soc. **46** 1943 pp. 129-132 4 figs.
- 22.—**Anon.** How the torpedo fish delivers its electric shock. [Abstract of paper by W. Feldberg and A. Fessard.] Monthly Sci. News London **23** 1943 pp. 3-4 figs. 5 and 6.
- 23.—**Appanna, T. C.** and **Devadatta, S. C.** Comparative studies on the nutritive value of fish and prawns muscle. Current Sci. Bangalore **11** 1942 pp. 333-335.
- 24.—**Applegate, V. C.** Partial analysis of growth in a population of mudminnows, *Umbra limi* (Kirtland). Copeia Ann Arbor 1943 pp. 92-96.
- Applegate, V. C.** see Lagler, K. F.
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- Armstrong, F. H.** see Hayes, F. R.
- 25.—**Atkins, E. M.** The classification of fishes. (Presidential Address.) Proc. Croydon nat. Hist. sci. Soc. **11** 1941 pp. 61-71 pl. iii.
- 26.—**Azevedo, P. de and Vieira, B. B.** Realizações da comissão técnica de piscicultura do nordeste. Arq. Inst. Biol. S. Paulo **11** 1940 pp. 23-38 pls. iii-viii.
- 27.—**Bacharach, A. L., Cruikshank, E. M., Henry, K. M., Kon, S. K., Lovern, J. A., Moore, T. and Morton, R. A.** The herring as a source of vitamins A and D. A collaborative investigation. Brit. Med. J. London **1942** 4275 pp. 691-693.
- 28.—**Baggaley, W.** The stickleback in the aquarium. Country-Side, Kingston-on-Thames N.S. **12** 1942 pp. 87-90.
- 29.—**Bailey, B., Koran, P. and Bradley, H. C.** The autolysis of muscle of highly active and less active fish. Biol. Bull. Woods Hole **83** 1942 pp. 129-136.
- 30.—**Bailey, B. E.** Fish Oils. IX. Certain fish oils as sources of nutritionally essential fatty acids. J. Fish. Res. Bd. Canada **6** 1943 pp. 109-112.
- Bailey, R. M.** see Hubbs, C. L.
- 31.—**Baker, C. L.** The effects on fish of gulping atmospheric air from waters of various carbon dioxide tensions. J. Tenn. Acad. Sci. **17** 1942 pp. 39-50.
- 32.—**Bal, D. V.** Some recent additions of fish eggs and larvae to the fauna of Port Erin. Rpt. Mar. Biol. Stat. Port Erin No. 53 1940 pp. 14-17.
- 33.—**Bal, D. V.** Observations on spawning periods and key to pelagic eggs of fishes in Manx waters. Proc. Liverpool biol. Soc. **54** 1941 pp. 1-8.
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**37.—Bangham, R. V.** Parasites of fresh-water fish of Southern Florida. Proc. Florida Acad. Sci. **5** 1941 pp. 289-307.

**38.—Bangham, R. V. and Venard, C. E.** Studies on parasites of Reelfoot Lake fish. IV. Distribution studies and check-list of parasites. J. Tenn. Acad. Sci. **17** 1942 pp. 22-38.

**39.—Barbey, M.** Les synapses de la cellule de Mauthner chez le poisson rouge. Arch. Sci. phys. nat. Genève (5) **24** Mars-Avril 1942 pp. 90-92.

**40.—Barbour, T.** The north-western Atlantic species of frog fishes. Proc. New England Zool. Club **19** 1942 pp. 21-40 pls. viii-xvii.

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**54.—Baughman, J. L.** A note on the dolphin (*Coryphaena hippurus*) and the method of its capture by the ancients. Copeia Ann Arbor 1942 p. 127.

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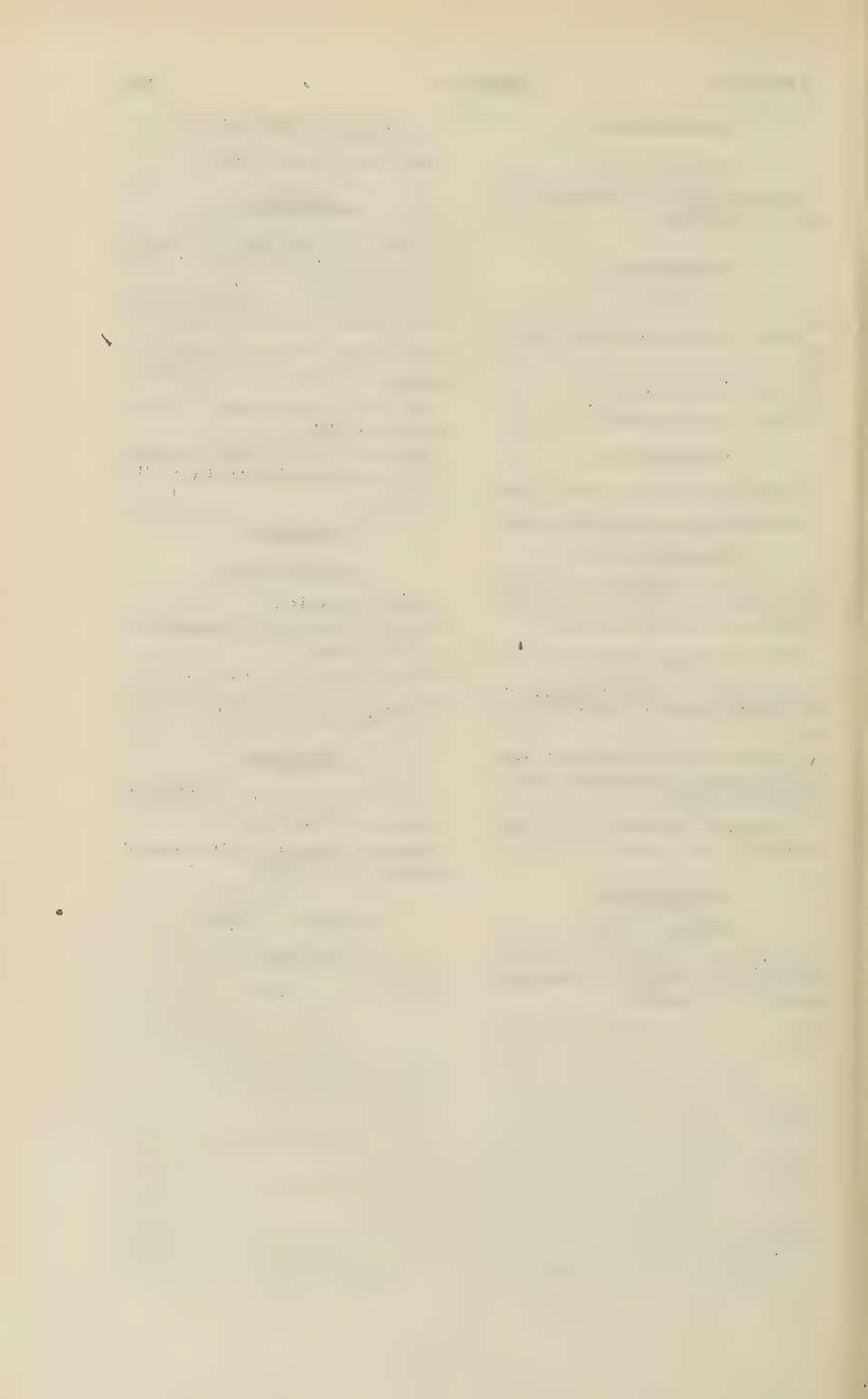
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# 16. AMPHIBIA AND REPTILIA.

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# 17. AVES

ARRANGED BY

the late W. L. SCLATER, M.A.

It is with deep regret that we record that Mr. W. L. Selater was killed by enemy action on July 4th, 1944. The following Section has been compiled from his MSS.

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Full references are given only in the cases of new genera and species. In other cases the numeral in larger

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# 18. MAMMALIA.

ARRANGED BY

the late Mr. W. L. SCLATER, M.A.,

AND

F. C. FRASER, D.Sc.

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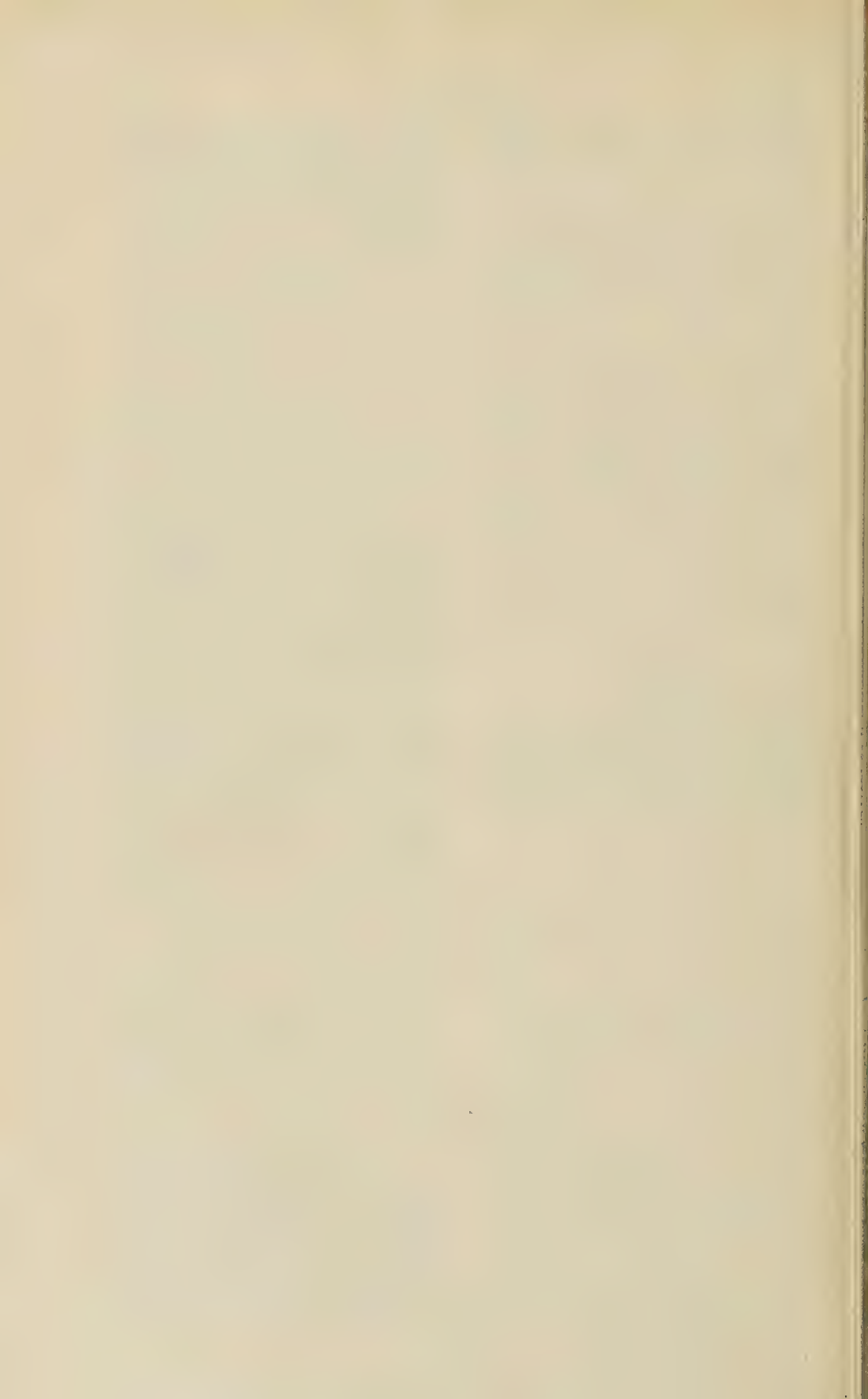
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- |   |  |
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 Calochrysa *Banks* Ins. 181  
 Calyptomma *Resser* Trilo. 6  
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 Cephaloplectodes *SeEVERS & Dybas* Ins. 118  
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 Chalixodytes *Schultz* Pisces 73  
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 Chilacris *Liebermann* Ins. 236  
 Childrena *Henning* Ins. 164  
 Chiloeconger *Myers & Wade* Pisces 61  
 Chilomyia *Shannon* Ins. 193  
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- Chloronotus Timberlake* Ins. 120  
*Chloroxyrrhypes Uvarov* Ins. 226  
*Cholodactylus Pereira & Cuocolo*  
   Vermes 46  
*Choristimodes Hebard* Ins. 223  
*Chrysomys Sandlake* Ins. 153  
*Chrysoplepe Salles* Ins. 195  
*Cingulata Mihely* Ins. 147  
*Clavella Aczel* Ins. 191  
*Clarkaltica Weise* Ins. 141  
*Clavophorini Salmo* Ins. 229  
*Clonacris Uvarov* Ins. 226  
*Clostoecca Banks* Ins. 178  
*Clostridium* *see Echin* Ins. 132  
*Coccullicia Timberlake* Ins. 120  
*Cochilognathus Fernald* Arach. 58  
*Cochlicopeus Whitley* Pisces 78  
*Cocconeus Baker* Moll. 55  
*Coelocina Verrill* Ins. 158  
*Congronna Reed* Trilo. 6  
*Colaspomorpha Weise* Ins. 140  
*Colectropis Myers & Wade* Pisces 77  
*Collinias Aczel* Ins. 191  
*Colomphareus Goodnight* Arach. 52  
*Colphepeira Archer* Arach. 35  
*Conodontosaurus Gilmore* Rept. 26  
*Corbettaella Sampson* Ins. 214  
*Cornubia Turk* Arach. 41  
*Coronata Goodnight* Vermes 68  
*Coronichthys Herre* Pisces 78  
*Corunegenys Wade* Pisces 57  
*Corynopomops Fowler* Pisces 62  
*Corynuroides Sandhouse* Ins. 144  
*Coryphoblenius Norman* Pisces 76  
*Cotonopsis Olsson* Moll. 36  
*Creagrocercus Baylis* Vermes 61  
*Crepidoma Chen* Ins. 141  
*Cromobergia Köhler* Ins. 171  
*Cruzomyia Lane & Cerqueira* Ins. 185  
*Cruzodermus Chamberlin* Arach. 57  
*Cryptima Chamberlin* Arach. 57  
*Crythiosaurus Gilmore* Rept. 27  
*Ctenocranius Melin* Amph. 24  
*Cunicardioceras Arkell* Moll. 53  
*Cyclocotyloides Price* Vermes 47  
*Cyclophleps James* Ins. 189  
*Cyclothabdoles Schubart* Arach. 57  
*Cynoscartes Norman* Pisces 76  
*Cyrtocrinus Kirk* Echin. 9  
*Cyrtoproetus Reed* Trilo. 7  
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*Dalmoburis Park* Ins. 116  
*Dalmonexus Park* Ins. 117  
*Dasyphorina Enderlein* Ins. 197  
*Davismyia Lane & Cerqueira* Ins. 185  
*Decarfuss Park* Ins. 117  
*Deirosteus Wells* Pisces 54  
*Delophon Chamberlin* Arach. 57  
*Deltorhynchus DeLong* Ins. 210  
*Dentigera Mihely* Ins. 147  
  
*Dermochinus Mortensen* Echin. 7  
*Dermosteira Schultz* Pisces 73  
*Desmatotitan Granger & Gregory*  
   Mamm. 50  
*Deuterosinella Salmon* Ins. 230  
*Dicranoproductus Stenbrook* Brach. 7  
*Dicelophoroides Price* Vermes 47  
*Dicosmoecus Banks* Ins. 178  
*Dicystocystis Nye* Vermes 47  
*Dietyotingis Drake* Ins. 204  
*Diploides Hartzell* Mamm. 61  
*Diplosalenia Mortensen* Echin. 7  
*Disocrinus Peck* Echin. 9  
*Dismicropora Blake* Ins. 141  
*Distichodonta Banks* Ins. 180  
*Dixilosinus Chamberlin* Arach. 57  
*Dikranomyia Obraztsov* Ins. 177  
*Dolichothinoides Granger & Gregory*  
   Mamm. 50  
*Dolichosacculus Johnston* Vermes 48  
*Dolichoptera Banks* Ins. 179  
*Donaecus Cresson* Ins. 199  
*Drepanosira Bonet* Ins. 230  
*Dryesia Sampson* Ins. 215  
*Drumaspis Resser* Trilo. 7  
*Dryopsis Herrich-Schäffer* Ins. 150  
*Dubiaranea Mello-Leitão* Arach. 33  
*Duhemia Rungs* Ins. 171  
*Dyaperla Banks* Ins. 220  
*Dyseritulus Hincks* Ins. 160  
  
*Echinorhynchoides Achmerov &*  
   *Achmerova* Vermes 63  
*Echinorhynchus Smith* Pisces 78  
*Ecitolimulodes Seever & Dybas* Ins. 118  
*Ecitosaurus Fischer* Ins. 112  
*Echinoa Chamberlin* Arach. 57  
*Electrocoris Usinger* Ins. 234  
*Electrocrania Nye* Vermes 50  
*Elymnetocaris Enderlein* Ins. 163  
*Enallagma Fernald* Ins. 234  
*Enontionura Resser* Trilo. 8  
*Eocaria Timberlake* Ins. 121  
*Eochelone Plaud'schekia* Ins. 137  
*Eocumularia Sinclair* Moll. 40  
*Eodromus Pongrácz* Ins. 232  
*Eodampetis Pongrácz* Ins. 232  
*Eolampra Pongrácz* Ins. 234  
*Eomartiniopsis Sokolskaya* Brach. 10  
*Eosyringothyris Stainbrook* Brach. 9  
*Epiplogiops Blanchard* Ins. 195  
*Ephyrogymna Hedgpeth* Arach. 30  
*Epimanteociras Granger & Gregory*  
   Mamm. 51  
*Eremosmia Michener* Ins. 143  
*Eremotmethis Uvarov* Ins. 226  
*Ergene Chamberlin* Arach. 57  
*Eriotremex Benson* Ins. 160  
*Erymophora Hastings* Bry. 5  
*Erythroneda Timberlake* Ins. 121  
*Etadononyx Hibbard* Mamm. 55

- Eubradypus Lönnberg* Mamm. 49  
*Euchistospiza Wolters* Aves. 75  
*Euctenopsia Bruch* Ins. 112  
*Eudinaspis Lizer y Trelles* Ins. 215  
*Eudorylas Aczel* Ins. 191  
*Euepicrius Womersley* Arach. 42  
*Eufriesea Cockerell* Ins. 145  
*Eularina Iredale* Moll. 31  
*Eunomioides Blüthgen* Ins. 147  
*Euryapis Sandhouse* Ins. 145  
*Euryarges Myers & Wade* Pisces 77  
*Eurychiroides Womersley* Arach. 42  
*Euryeros Mickel & Kronbein* Ins. 151  
*Eurynotoides Berg* Pisces 56  
*Eurystylops Bohart* Ins. 127  
*Eusounama Liu* Ins. 208  
*Eutambourina Evans* Ins. 210  
*Eutomostethus Enslin* Ins. 161  
*Evita Capps* Ins. 174  
*Ewingella Vail & Augustson* Arach. 42  
  
*Fagasa Schultz* Pisces 74  
*Falsocedius Español* Ins. 125  
*Fasciata Méhely* Ins. 147  
*Fenusella Enslin* Ins. 160  
*Flamiruizia Liebermann* Ins. 227  
*Fletcherexius Park* Ins. 117  
*Fluvialosa Whitley* Pisces 59  
*Frauenfeldiella Gomez-Menor* Ins. 214  
*Frenosaurus Welles* Rept. 26  
*Friobius Chamberlin* Arach. 54  
*Frontelba Park* Ins. 117  
*Fur Whitley* Pisces 55  
*Fuscigonia Brooks* Ins. 195  
  
*Gaedeia Romieux* Ins. 173  
*Gata Blackwelder* Ins. 115  
*Geochen Wetmore* Aves 62  
*Gerontochoerus Leakey* Mamm. 52  
*Glacidorbis Iredale* Moll. 41  
*Glacilimnia Iredale* Moll. 41  
*Glossosmia Michener* Ins. 143  
*Glyptaeros Mickel & Kronbein* Ins. 151  
*Glyptamoda Iredale* Moll. 41  
*Glyptobasia Moure* Ins. 145  
*Glyptonysius Usinger* Ins. 203  
*Gnathantes Chamberlin & Ivie* Arach. 34  
*Gnatholeptus Blackman* Ins. 135  
*Gnathotitan Granger & Gregory* Mamm. 51  
*Gobitrichonotus Fowler* Pisces 73  
*Goitacazia Mello-Leitaõ* Arach. 53  
*Goliathites Arkell* Moll. 54  
*Goniscala Marwick* Moll. 34  
*Grayaria Chamberlin* Arach. 58  
*Gremlinotrophus Reinhard* Ins. 195  
*Grimaldia Chapman* Pisces 60  
*Groteiplestes Wolters* Aves 75  
*Gueriniopsis Reinhard* Ins. 196  
*Guianadesma Morrison* Moll. 51  
  
*Guntherana Womersley & Heaslip* Arach. 42  
*Gymnocalicotyle Nybelin* Vermes 48  
*Gyrocaria Timberlake* Ins. 121  
  
*Habralictus Moure* Ins. 145  
*Hackeriapis Cockerell* Ins. 146  
*Hajulia Woodward* Pisces 57  
*Hakelia Woodward* Pisces 60  
*Haliger Mello-Leitaõ* Arach. 35  
*Hallaspis Raasch & Lochman* Trilo. 5  
*Halopsephus Rehder* Moll. 29  
*Hamana DeLong* Ins. 211  
*Hauffapis Armbruster* Ins. 233  
*Helicogonus Verhoeff* Arach. 58  
*Hemicentrotus Mortensen* Echin. 7  
*Hemigyris Achmerov & Achmerova* Vermes 63  
*Heptatoma Weise* Ins. 142  
*Hesperaleyrodes Sampson* Ins. 214  
*Hesseybius Verhoeff* Arach. 55  
*Hetaeriarchus Reichensperger* Ins. 119  
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*Heterobapta Wilshire* Ins. 174  
*Heterocaria Timberlake* Ins. 121  
*Heterofragilia Hedgpeth* Arach. 30  
*Heteropoides Sandhouse* Ins. 145  
*Heterorhiza Cockerell* Ins. 147  
*Hexobelomeryx Furlong* Mamm. 53  
*Hexorthodes McDunnough* Ins. 171  
*Hexosmia Michener* Ins. 143  
*Hiatomyia Shannon* Ins. 192  
*Hilboldtina Scott & Summerson* Crust. 19  
*Hilmylepis Skrzabin & Matherossian* Vermes 50  
*Holdenius Dunkle & Bungart* Pisces 54  
*Holocentrites Woodward* Pisces 70  
*Homalictus Cockerell* Ins. 145  
*Homorthodes McDunnough* Ins. 171  
*Hoplomyzon Myers* Pisces 67  
*Horadandia Deraniyagala* Pisces 64  
*Hormathianthus Carlqren* Coel. 22  
*Hua Chen* Moll. 31  
*Hughichthys Schultz* Pisces 73  
*Hyaliodocoris Knight* Ins. 205  
*Hydralmosaurus Welles* Rept. 26  
*Hydrotherosaurus Welles* Rept. 26  
*Hynesia China* Ins. 206  
*Hyotitan Granger & Gregory* Mamm. 51  
*Hypargoides Wolters* Aves 75  
*Hypermekops White* Mamm. 52  
*Hypertmetus Marshall* Ins. 133  
*Hypoceridites Brues* Ins. 233  
*Hypobleniops Schultz* Pisces 76  
  
*Ichthyriapus Hibbard* Pisces 56  
*Icteronysius Usinger* Ins. 203  
*Idiogarypus Chamberlin* Arach. 51  
*Idiolimulodes Seevers & Dybas* Ins. 118  
*Idrusia Corbet* Ins. 165

- Ilmenia Nalirkin* Brach. 10  
*Imperfecta Méhely* Ins. 147  
*Indiplana Stummer-Traunfels* Vermes 45  
*Iotaphia Cameron* Ins. 112  
*Ipsocaps Fowler* Pisces 61  
*Isanotmethis Uvarov* Ins. 227  
*Ireneidris Donisthorpe* Ins. 154  
*Irvineia Trewavas* Pisces 66  
*Isodontosaurus Gilmore* Rept. 27  
*Istiblennius Whitley* Pisces 76  
  
*Jassopsaltria Ashton* Ins. 207  
*Juxtahamotopsis Park* Ins. 117  
  
*Kalesmus Chamberlin* Arach. 58  
*Kantaka Hora* Pisces 65  
*Kaupichthys Schultz* Pisces 61  
*Kikuchiella Kato* Ins. 211  
*Kitakamiia Sugiyama* Coel. 10  
*Kiusiozonium Verhoeff* Arach. 58  
*Klugella Hastings* Bry. 6  
*Knightiella Carvalho & Drake* Ins. 205  
*Kosswigichthys Sözer* Pisces 68  
*Kosswigius Verhoeff* Crust. 15  
*Krimhilda Wolters* Aves 75  
  
*Labuella Chamberlin & Irie* Arach. 34  
*Ladogia Nalirkin* Brach. 8  
*Lagriodema Borchmann* Ins. 126  
*Lambdina Capps* Ins. 174  
*Lambdopsis Méhely* Ins. 147  
*Lamnarius Whitley* Pisces 55  
*Lasiolathus Loomis* Arach. 58  
*Latithorax Holm* Arach. 34  
*Laytonia David* Pisces 61  
*Leionysius Usinger* Ins. 203  
*Lenameria Iredale* Moll. 41  
*Lepicephalochromis Fowler* Pisces 73  
*Lepiseoda Enderlein* Ins. 186  
*Lepronyssoides Fomesca* Arach. 42  
*Leptenchelys Myers & Wade* Pisces 61  
*Leptotingis Monte* Ins. 204  
*Leucochloridiomorpha Allison* Vermes 48  
*Leucoptilum James* Ins. 189  
*Levella Marwick* Moll. 29  
*Leviaspis Rasetti* Trilo. 9  
*Levicepolis Baker* Moll. 44  
*Libytheana Michener* Ins. 165  
*Limamyia Lane & Cerqueira* Ins. 185  
*Liophistrema Artigas, Ruiz & Leon* Vermes 48  
*Lispideosoma Reinhard* Ins. 196  
*Lisu Liu* Ins. 207  
*Loewimyia Sabrosky* Ins. 200  
*Loganopeltis Rasetti* Trilo. 9  
*Longitrella Olson* Moll. 37  
*Longitubus Howell* Vermes 68  
*Lopheuthymia Uvarov* Ins. 227  
*Lophodiodon Fraser-Brunner* Pisces 78  
  
*Lucasiellus Cockerell* Ins. 146  
*Luciploma Olson* Moll. 50  
*Lufengosaurus Young* Rept. 30  
*Lupinoblennius Herre* Pisces 76  
*Lystridea Oman* Ins. 211  
  
*Machaerorrhinus Marshall* Ins. 133  
*Macrocephalosaurus Gilmore* Rept. 27  
*Macrodipteron Enslin* Ins. 160  
*Macrodontacanthus Romer* Pisces 55  
*Macropomoides Woodward* Pisces 79  
*Macuchicola Mello-Leitao* Arach. 53  
*Maderesmus Chamberlin* Arach. 58  
*Maia Sugiyama* Coel. 24  
*Malbius Chamberlin* Arach. 55  
*Maltoniceras Arkell* Moll. 54  
*Manfredia Schubart* Arach. 58  
*Mannichthys Schultz* Pisces 65  
*Manriqueia Boshell & Kerr* Arach. 43  
*Margana DeLong* Ins. 211  
*Marquesiana Womersley* Arach. 43  
*Masticbarbus Tang* Pisces 65  
*Mastreutobombus Krüger* Ins. 143  
*Matsumuranoda Metcalf* Ins. 208  
*Mauicassis Fleming* Moll. 34  
*Mauria Marwick* Moll. 38  
*Mediastinia Hebard* Ins. 224  
*Megamareta Hebard* Ins. 224  
*Megapharynx Legendre* Pisces 63  
*Mehelya Popov* Ins. 147  
*Mehelyana Sandhouse* Ins. 148  
*Meiacanthus Norman* Pisces 76  
*Melanotmethis Uvarov* Ins. 227  
*Meloe Sandhouse* Ins. 146  
*Menochilus Timberlake* Ins. 121  
*Mesamphisopus Nicholls* Crust. 14  
*Mesentotoma Salmon* Ins. 230  
*Mesitodes Marshall* Ins. 133  
*Mesoplica Reed* Brach. 7  
*Metalcyrodes Sampson* Ins. 215  
*Metamimeceton Reichensperger* Ins. 113  
*Metapeachia Carlgren* Coel. 24  
*Metaphillipsia Reed* Trilo. 9  
*Metaplesius Marshall* Ins. 133  
*Metarhodactis Carlgren* Coel. 24  
*Metatitan Granger & Gregory* Mamm. 51  
*Methodes Marshall* Ins. 133  
*Mexaphaenops Bolivar Piellain* Ins. 109  
*Mexiplectus Park* Ins. 117  
*Microcottus Schmidt* Pisces 78  
*Microdiptomus Tafall* Crust. 18  
*Microdipteron Enslin* Ins. 160  
*Microdochus Rehder* Moll. 30  
*Microtitan Granger & Gregory* Mamm. 51  
*Microvescia Wygodzinsky* Ins. 204  
*Mideopsides Ljunblad* Arach. 49  
*Mimeosaurus Gilmore* Rept. 27  
*Mimocalla Hull* Ins. 192  
*Minigomus Verhoeff* Arach. 59  
*Miomysotis Lawrence* Mamm. 62  
*Mohavelix Berry* Moll. 44



- Molanniella Banks* Ins. 179.  
*Molinaranea Mello-Leitão* Arach. 36.  
*Monacoa Whitley* Pisces 60.  
*Monocnulus Baker* Moll. 55.  
*Montedelos Iredale* Moll. 44.  
*Monteus Bondar* Ins. 133.  
*Moralesia Fowler* Pisces 62.  
*Morelene Chamberlin* Arach. 59.  
*Morenilia Mello-Leitão* Arach. 37.  
*Morenosaurus Welles* Rept. 26.  
*Mormia Enderlein* Ins. 186.  
*Morunguis Chamberlin* Arach. 55.  
*Moyanella Boshell & Kerr* Arach. 43.  
*Multifasciculatum Goodrich & Jahn*  
 Prot. 60.  
*Mutillimya Hull* Ins. 194.  
*Myioblab Enderlein* Ins. 199.  
*Myotrombicula Womersley & Haslip*  
 Arach. 43.  
  
*Nanopitar Rehder* Moll. 50.  
*Navicularia Méhely* Ins. 147.  
*Nealeurogiton Sampson* Ins. 214.  
*Neanalcoerus James* Ins. 189.  
*Neotarges Myers & Wade* Pisces 77.  
*Neobourquinia Köhler* Ins. 173.  
*Neobradypus Löwenberg* Mamm. 49.  
*Neochelonella Hincks* Ins. 159.  
*Neocicada Kato* Ins. 207.  
*Neoheptaulacus Paulian & Villiers* Ins.  
 129.  
*Neoheterobothrium Price* Vermes 49.  
*Neoichoronyssus Fonseca* Arach. 43.  
*Neolimulodes SeEVERS & Dybar* Ins. 118.  
*Neoperlops Banks* Ins. 220.  
*Neos Marshall* Ins. 133.  
*Neoscapha Vinson* Ins. 119.  
*Neoscirtetica Schrottky* Ins. 146.  
*Neoscutopterus Balfour-Brown* Ins.  
 110.  
*Neosiro Newell* Arach. 52.  
*Neotherina Capps* Ins. 174.  
*Neotituria Kato* Ins. 211.  
*Neotrochus Blackwelder* Ins. 113.  
*Nerterogeomys Gazin* Mamm. 56.  
*Nertinus Marshall* Ins. 133.  
*Nesaloia Oman* Ins. 213.  
*Nesiobius Marshall* Ins. 133.  
*Neuquenina Rehn* Ins. 227.  
*Nimio-cauda Reinhard* Ins. 196.  
*Nipponivalgus Sawada* Ins. 131.  
*Nippononaiia Suzuki* Moll. 48.  
*Nipponophyllum Sugiyama* Coel. 25.  
*Nitidotipula Alexander* Ins. 189.  
*Nobilotipula Alexander* Ins. 189.  
*Nodoplanulis Hussey* Prot. 57.  
*Notiobiosis Banks* Ins. 179.  
*Notopalena Iredale* Moll. 29.  
*Nowickia Kjellander* Ins. 181.  
*Nukta Hora* Pisces 65.  
*Nyetomelitta Cockerell* Ins. 149.  
  
*Oaphantes Chamberlin & Ivie* Arach. 34.  
*Obesitena Iredale* Moll. 30.  
*Ocelloria Weber* Ins. 218.  
*Ochrothyris Forbes* Ins. 176.  
*Odontomycter Marshall* Ins. 133.  
*Oedotingis Drake* Ins. 204.  
*Oenopus Marshall* Ins. 133.  
*Oligna Chamberlin* Arach. 55.  
*Oligolepis Arrow* Ins. 130 *nom. nud.*  
*Oligoscelus Marshall* Ins. 133.  
*Oophthalmus Marshall* Ins. 133.  
*Ophiosema Romieux* Ins. 172.  
*Orococalus Marshall* Ins. 133.  
*Orphanotrophus Reinhard* Ins. 196.  
*Orthogonocrinus Peck* Echin. 9.  
*Orthyma Chamberlin* Arach. 59.  
*Osteochilichthys Hora* Pisces 65.  
*Othinanaphothrips Crawford* Ins. 217.  
*Othinosmia Michener* Ins. 143.  
*Otinia Antoine* Ins. 126.  
*Oxymetopa Turner* Ins. 173.  
*Oxytrigona Cockerell* Ins. 149.  
  
*Pachycephosaurus Schlaikjer* Rept. 31.  
*Pachytitan Granger & Gregory* Mamm.  
 51.  
*Pacidianus Reinhard* Ins. 196.  
*Paitangulus Chamberlin* Arach. 55.  
*Paleastur Wetmore* Aves 63.  
*Paleochoristes Sokolskaia* Arach. 10.  
*Paleoclupsea Dante* Pisces 58.  
*Paleopleurodeles Herre* Amph. 23.  
*Paleoscia Caster* Coel. 10.  
*Pallaeocephalidium Plavil'sheikov* Ins. 137.  
*Panabachia Park* Ins. 117.  
*Panacoma Olsson* Moll. 50.  
*Panaramecia Park* Ins. 117.  
*Pantocryptus Arrow* Ins. 119.  
*Papiana Tuthill* Ins. 212.  
*Papuservus Whitley* Pisces 70.  
*Parabelonichthys Fowler* Pisces 69.  
*Parabrontops Granger & Gregory*  
 Mamm. 51.  
*Paracapritermes Hill* Ins. 219.  
*Paracephaleus Evans* Ins. 211.  
*Parachubutia Mello-Leitão* Arach. 32.  
*Paracadaster Yakovlev* Echin. 10.  
*Parada Horváth* Ins. 203.  
*Paradrasinus Park* Ins. 117.  
*Paraendothyra Tchernysheva* Prot. 57.  
*Paragopus Chen* Ins. 142.  
*Paragotoea Kramp* Coel. 10.  
*Paragraulus Lu* Trilo. 10.  
*Parahizocercus Goux* Ins. 216.  
*Parajanellus Goodnight* Arach. 53.  
*Paraleia Armbruster* Ins. 233.  
*Paralobia Goding* Ins. 209.  
*Paraminus Fowler* Pisces 77.  
*Paramormia Enderlein* Ins. 186.  
*Paramphisopus Nicholls* Crust. 14.  
*Parapa Nixon* Ins. 159.

- Paraneda *Timberlake* Ins. 121  
 Paranonion *Logue & Haas* Prot. 57  
 Paraphareus *Goodnight* Arach. 53  
 Paraphorodon *Tseng* Ins. 214  
 Paraplectes *Wollers* Aves 75  
 Paraprosopis *Popov* Ins. 147  
 Parapterola *Pelaez* Ins. 203  
 Parasiniabeo *Wu* Pisces 65  
 Paraspithius *Nixon* Ins. 159  
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 Paratagalis *Monte* Ins. 204  
 Parateniotes *Dillon* Ins. 139  
 Paratoxidium *Vinson* Ins. 149  
 Paratricommatus *Piza* Arach. 52  
 Paratridactylus *Ehner* Ins. 228  
 Pardirocephalus *Bruch* Ins. 114  
 Parhomoeogammarus *Schellenberg*  
     Crust. 16  
 Parodontops *Schultz & Miles* Pisces 63  
 Parorgerius *de Bergerin* Ins. 207  
 Parrichthys *Barbour* Pisces 79  
 Pateroperca *Woodward* Pisces 70  
 Pectinata *Méhely* Ins. 147  
 Pellamora *Iredale* Moll. 30  
 Pelsartia *Whitley* Pisces 70  
 Penichrophorus *Richter* Ins. 209  
 Pentacolosendeis *Hedgpeth* Arach. 31  
 Peplimnea *Iredale* Moll. 41  
 Perimelba *Park* Ins. 117  
 Peripsychoda *Enderlein* Ins. 186  
 Permagra *Evans* Ins. 234  
 Permocephalus *Evans* Ins. 234  
 Perodira *Baylis* Vermes 62  
 Pettancylus *Iredale* Moll. 41  
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1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	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